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Institutional Food Cost Control Under Wartime Conditions
T. F. Bradshaw

Adequacy of a Diet Eaten by Children Eight to Eleven Years of Age
Frances A. Johnston, Ph.D.

A Method for the Evaluation of a Community Nutrition Program
Annette Young, M.S.

The Vitamin A Value of Dehydrated Sweet Potatoes and Carrots
Florence I. Scoular, Ph.D., Jewell E. Ballew, M.S., Catherine J. Carl, M.S., and Vera Dozier, M.S.

Some Mineral Constituents of the Edible Portion of Scuppernong Grapes
Margaret Kramer, A.B., M.S., and G. Howard Satterfield, B.S., M.A.

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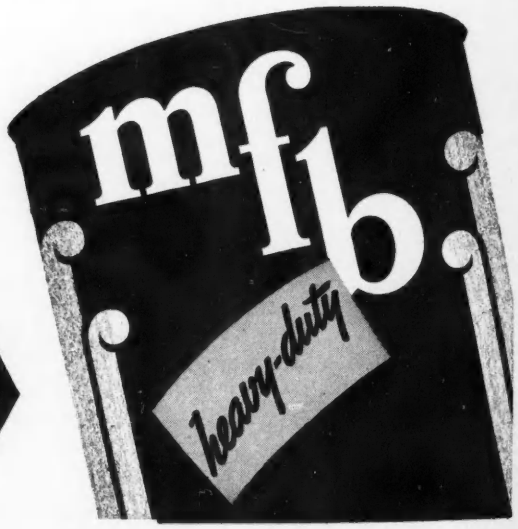

Institutional Food Cost Control Under Wartime Conditions

T. F. BRADSHAW

The following article describes the method of food cost control now in use at the Harvard Graduate School of Business Administration. When it appeared that the facilities of the school would be devoted largely to the training of Army and Navy personnel, Mr. Bradshaw, in the capacity of consultant to the Harvard Business School dining halls, was "borrowed" from the Accounting Department to aid in the installation of a food cost control system. Mr. Bradshaw writes, "The job was really done by the director of our dining halls, Miss Alice Fenno, and by her assistant, Miss Opal Bowers . . . they are both doing a real war job." (Miss Fenno and Miss Bowers are prominent members of the American Dietetic Association and Miss Bowers is now president of the Massachusetts Dietetic Association.) In view of the fact that the system described is specific rather than general and that a cost accountant is not needed either to install the system or to keep it in operation, it is believed that the plan will appeal to a large number of institutions now facing problems similar to those encountered at the Harvard Business School.

THE duties of an institutional food director can be envisaged as a three-legged stool, one leg of which is producing a certain quantity of food of a specified quality; another leg is providing guests, or "sign-ons," with service; and the third leg is accomplishing both the above at a certain level of costs. Needless to say, a three-legged stool topples if any one of the legs is removed. In these days of headaches in procuring food and labor and facilities to cope with the Army and Navy schools established in the colleges, the third leg—cost control—is likely to be slighted. In the short run it appears to be the least important, and certainly dining hall directors are not in the business of producing figures.

But figures can be helpful if used with a large dash of common sense. Here at the Harvard Graduate School of Business Administration, a unit of Harvard University, a system of food cost control has been developed that appears to be weathering the stress and strain of war conditions. The facilities of the Harvard Business School are now being used to train Army and Navy men for specific jobs in the armed services. Since these men are here under various government contracts, it has become necessary for the school to "know" its costs. Furthermore, costs of feeding each group of men, or each school within the school, had to be readily ascertainable. Lastly, the dining hall directors wanted to do the very best job possible as their contribution to the war effort. The system of food cost control described in this article was designed to aid in accomplishing these ends.

Each institution, of course, presents its own problems which require individual solution; but we can always solve our own difficulties more effectively if we know how other people are approaching similar problems. Thus the thought I have in mind in describing the system in use at the Harvard Business School is not that any other institution will adopt it as it stands, but that the readers of this JOURNAL may have the benefit of our experience to aid them in meeting their own problems. A further word of warning should be added. No system runs itself and no system is run for itself. A food control system must be merely a way of systematizing a part of the work of the food director and providing him or her with the tools necessary to do a better job.

THE MECHANICS OF THE SYSTEM

Food control begins in the storeroom. The Harvard Business School operates a central storeroom which serves a central kitchen, a bakeshop, and a number of dining halls. In order to facilitate the work of the pantrywoman in charge of each hall, long requisition slips—18 inches long and 5 inches wide—were designed. Printed on the slips are the items most commonly ordered from the storeroom. The first thing in the morning, each pantrywoman indicates on one of these slips the amount of each item she needs—breakfast foods, coffee, etc.—and sends the slip down to the storeroom by a bus-boy. The storeroom man fills the order and retains the requisition slip. If the pantrywoman requires anything later during the day she sends down a small signed requisition order, which the storeroom man fills and transfers the information to the long requisition slip in the appropriate spaces. The cook and baker follow the same procedures.

At the end of the day the storeroom man adds across on each slip and indicates in the right-hand column the total amount of each commodity requisitioned out of the storeroom to the particular hall which the slip represents. The following morning the clerk arranges the slips (across the top of which holes are punched) on a pegboard so that only the right-hand columns show. The clerk then adds across each line and obtains the total of each commodity requisitioned to all the dining halls, the kitchen, and the bakeshop. These totals are entered on a summary sheet.

From the summary sheet the quantities requisitioned out of storeroom are transferred to perpetual inventory cards. A commodity card for each article of food is kept in a "Visible Index" binder. The cards are arranged in banks so that a particular card may be located quickly. Each card contains a column for purchases of the item both in physical quantities and in dollar amounts, a column for requisitions out of storeroom in physical quantities—as per the summary requisition slip—and a column for the balance on hand. Thus the clerk can keep a watchful eye on balances of staple goods on hand and can advise the director of dining halls when to reorder.

At the end of the month a physical inventory is taken and compared with the book inventory as shown on the perpetual inventory cards. When discrepancies are large, a recount of the items concerned is made, and more often than not it is the physical inventory which is found to be wrong. This is, however, a common occurrence in business; an accurate physical inventory is harder to obtain than is generally supposed.

The long requisition slips serve two other purposes. First, whenever a comparison of the amounts of various items sent to each hall is needed, the slips for a single hall for a week's period or longer can be arranged on the pegboard and the items totaled across. Such figures are useful in tracing down extravagant uses of staple goods to specific serving halls. But the system is not inflexible; such figures are drawn off only when the director wants them. Second, the summary requisition slip serves to provide some of the information needed for the computation of the amount of food used each day. This brings us to the heart of this system of food cost control.

To reconstruct the cost of the day's menus is not an easy task; it requires skill, common sense, and patience. If possible, the collection of daily food costs should be the responsibility of someone who knows foods and prices and is in close contact with the kitchen. Of course, it is far from a full-time job. At the Harvard Business School it takes about an hour or two each day of the assistant director's time.

The form around which the collection of costs revolves is a lined sheet which measures 9½ inches across and 15½ inches long. The following breakdown of foods is printed on the daily cost sheet:

1. Meat, Fish, Poultry, Eggs, Cheese
   - a. Meat
   - b. Fish
   - c. Poultry
   - d. Eggs
   - e. Cheese
2. Milk, Cream, Ice Cream
   - a. Milk
   - b. Cream
     - 16%
     - 30%
   - c. Ice Cream
3. Fruit
   - a. Fresh
   - b. Canned
   - c. Frozen
   - d. Dried
4. Vegetables
   - a. Fresh
   - b. Canned
   - c. Frozen
   - d. Dried
5. Cereals
   - a. Flours
   - b. Breakfast Cereals
   - c. Crackers
   - d. English Muffins, Bread
   - e. Macaroni, Spaghetti
6. Fats, Oils
   - a. Butter
   - b. Shortening, Oils
   - c. Chocolate, Cocoa
   - d. Nuts, Peanut Butter
7. Sugar, Syrups
   - a. Sugar
   - b. Jams, Jellies
   - c. Syrups, Honey, Molasses
8. Groceries
   - a. Spices, Extracts
   - b. Coffee, Tea
   - c. Sauces, Catsup, Pickles
   - d. Gelatins, Vinegars

Under each heading are lines on which to record in pencil the amounts of the items used during the day, the unit price (obtained from the perpetual inventory book in which the cards are coded in conformance with the above breakdown), and the extension.

Each morning the "cost supervisor" arms herself with the materials necessary to prepare the daily cost sheet. These consist of the following: (1) The summary sheet of requisitions out of storeroom described above. From this sheet the amount of coffee, ice cream, milk, breakfast foods, etc., used during the previous day can be transferred to the cost sheet. (2) The menu for the previous day. (3) A recipe card for each item on the menu.

As each cook or baker prepares food, he notes on a card the quantities of the ingredients used. The cost supervisor collects the recipe cards and is responsible for seeing that they are all reasonably filled out. From the recipe cards she transfers the amounts of food used in cooking to the daily cost sheet, using the menu as a check to see that all items are entered. At this point, of course, a hun-

dred and one problems arise to plague the cost supervisor, but in time these difficulties succumb to the weapons of experience and common sense.

When all food used has been entered on the cost sheet—and that does not take as much time as would appear—the sheet is given to a clerk who inserts prices, makes extensions, and totals the extensions. It is important to note at this point that subtotals are made by main categories of foods (those denoted by Arabic numerals in the list). The reason for obtaining these subtotals will become clear later. The final total on the sheet is, of course, the cost of food used for the previous day. This total is divided by the number of rations served to obtain a daily ration cost.

I have purposely described the mechanics of this system of cost control in its barest essentials. A working model would, of course, be designed to meet the needs of a particular institution. At the Harvard Business School there are complicating factors brought about by costing food prepared in the central kitchen for a faculty club, a student club, and an employees' cafeteria. Furthermore, the school operates an entirely separate mess hall for the Navy, serviced by its own storeroom and kitchen. The adaptability of the system is attested by the fact that food cost control has been extended to all the above-mentioned units.

ADVANTAGES TO THE FOOD DIRECTOR

Now wherein are the tools of control provided for the director of dining halls? First she observes the daily ration cost. From past experience she knows about what it should be. If it is too high or if it is too low, she will want to know why; and if it is about what it should be, she will want to know how she can keep up the good work. Does the daily cost sheet help her in her investigation? I believe it does, and does so with a minimum of time and effort.

In the first place, the prices paid for each item on the menu are before the director. From past experience she knows whether or not they are in line and what effect changing prices have on the ration cost. Secondly, the proportions of food used are before her in neat and familiar categories and she can quickly pick out the items which caused the ration cost to vary from the "reasonable normal."

At the end of the week, three statements are prepared, both for the director of the dining halls and for the dean responsible for dining hall operations. The first report is an income and expense statement. It should be apparent how simply the cost of food used during the week can be obtained. It is merely the grand total of the cost of food used, figured on the seven cost sheets of the week. The second report consists of a list of the number of rations served each day and the daily ration costs; this report is likewise drawn directly off the daily cost sheets. The third report is a control report. The subtotals by kinds of food, described above, are totaled to produce the total dollar value of each category of food used during the week. These totals are listed on a report and the percentage relationship is calculated. Both from experience in her own domain and from the experience of others, the director knows what percentage relationships provide an adequate diet. Of course, this control report must be used with some care because both changing prices and the increasing scarcity of certain foods tend to distort the percentages. Possibly the most fruitful application of this weekly food percentage report made at the Harvard Business School has been to indicate to Army and Navy officers the proportions of various kinds of food being served their men. A check against Army and Navy ration requirements can easily be made.

Although the next logical step after having perfected the procedures outlined above, is to develop a system of standard food cost control such as is used in large restaurants and hotels, I believe it is best to stop right here as long as the chaotic food market conditions brought about by the war continue. The cost collection system as outlined above provides the material for costing standard recipes and ultimately standard menu costs; but for the present, when help is scarce and likely to be untrained and facilities are overtaxed, the food cost control system in use at the Harvard Business School seems to provide a maximum of control with a minimum of paper work.

Genius and Culture

The mechanisms of genius are biological; but the content and the criteria of genius are cultural. Giftedness is a capacity to initiate, to sustain and to elaborate behavior which is exceptionally esteemed by the contemporary cultural group or by a later generation. We may well reserve the term genius for those rare individuals who are so supremely and uniquely gifted that they exert a permanent, significant impression on the patterns of the culture into which they were born.—*Gesell, A.: Genius, Giftedness, and Growth, The March of Medicine, New York Academy of Medicine, 1942.*

Adequacy of a Diet Eaten by Children Eight to Eleven Years of Age[1]

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THIS is a report on the nutritive value of a diet eaten by a group of 21 subjects who were offered meals containing the protective foods in the amounts usually advised for children. It therefore affords an opportunity to see how such a plan actually works out in practice: *i.e.* whether each child to whom the meals are served actually does eat enough, of his own accord, to supply him with adequate quantities of each dietary essential. These children were living at Mooseheart, an institution in Illinois which provides homes and schooling for about 500 children. The experimental group included 12 boys, 8, 9, and 10 years of age, and 9 girls, 9, 10, and 11 years of age, who were acting as subjects for a study of iron metabolism (1). Since all the food eaten by these children had to be weighed for the iron metabolism study, data were available which could be used for the calculations here reported.

In this institution the meals for all the cottages, which house 15 to 20 children each, are planned and supervised by a dietitian and prepared by cooks in the individual cottages. During the period studied the children continued to live on their regular diet. A study of the records showed that this diet was planned to make the following available for each child, daily:

1 quart of milk
1 serving of meat—including liver once every two weeks
1 egg (served "as eggs" or in custards, puddings, baked goods, salad dressings, milk shakes, etc.)
2 servings of fruit—including 1 serving of citrus fruit or tomatoes
2 or more servings of vegetable—including spinach twice a week most of the time
1 or 2 servings of potatoes
Whole cereal (the breakfast cereal was usually a whole-grain one; the bread, half white and half 60 per cent whole wheat flour.)

The way in which these foods were arranged in the diet is illustrated in the menus for the meals for three days (Table 1).

The children were expected to eat all the food served to them, though children who did not like certain foods were given only small servings of those for which they expressed dislike. Second servings, aside from meat and desserts, were usually available for those who wanted them. Since no water was put on the table, the children drank milk in the same way that most people drink water. Every child drank at least one glass at each meal and a small glass after school in the afternoon. The average milk consumption was 1.2 quarts. Some of the children frequently ate between meals and those who did were instructed to continue doing so during the experiment.

TABLE 1

Typical meal plans for three days during the experimental period

BREAKFAST	DINNER	SUPPER
Apple sauce	Meat pie	Hash
Cracked wheat	Boiled potatoes	Stewed tomatoes
Toast	Stewed corn	Egg salad
	Lettuce	Bananas
	Mayonnaise	
	Rice pudding	
Prunes	Fish	Scrambled eggs
Oatmeal	Creamed potatoes	Hashed browned potatoes
Toast	Corn and tomatoes	Green beans
	Lettuce	Ice cream
	Relish	Cake
	Raw apples	
Apple sauce	Beef loaf	Noodles and cheese
Oatmeal	Mashed potatoes	Creamed onions
Toast	Peas	Grapefruit
	Slaw	Cookies
	Prune whip	

Note: Equal amounts of 60% whole wheat bread and white bread, one pat of butter, and milk were served with all meals.

The sampling period was of two weeks' duration, or that found by previous work in this laboratory (2) to be the interval necessary for obtaining a typical

[1] Received for publication, December 11, 1942.

sample of a customary diet. Since the subjects were living in three separate cottages, the experiment was in progress during six weeks. The food consumed by each child at every meal and between meals was weighed on Hanson spring scales. The recipe book used by the institution was employed for calculating recipes. The tables of food composition used in calculating the dietary essentials were taken from culation; this was done by a group of people working on a WPA project in the department.

RESULTS

The results of the calculations are given in Table 2 and the recommended daily allowances formulated by the Committee on Food and Nutrition (now Food and Nutrition Board) of the National Research Council (3) are given for comparison. As for calories, it will be noted that the average intake for the boys, 2490 calories, was almost the same as that for the girls, 2460 calories. That the caloric consumption of the boys was no greater than that for the girls is explained by the fact that the boys averaged about a year younger than the girls. Since only three of the children were 10 per cent or more below the Baldwin-Wood standard (*see* Table 3), these results indicate that approximately 2400 to 2500 calories are sufficient for children of these ages

TABLE 2

Daily intakes of children and comparison of these with the recommended daily allowances of National Research Council

SUBJECT	AGE	CALORIES	PROTEIN	CALCIUM	PHOSPHORUS	IRON	MAGNESIUM	COPPER	MANGANESE	VITAMIN A	THIAMIN		RIBOFLAVIN	ASCORBIC ACID	
											Raw	Cooked		Raw	Cooked
	yr.—mo.		*gm.*	*gm.*	*gm.*	*mg.*	*mg.*	*mg.*	*mg.*	*I.U.*	*mg.*	*mg.*	*mg.*	*mg.*	*mg.*
Girls															
R. C.	9—2	2370	77	1.5	1.7	11.7	310	1.3	2.2	8340	1.3		3.0	100	
B. W.	9—4	2490	81	1.5	1.7	12.6	364	1.5	3.1	8130	1.4		3.0	102	
A. P.	9—7	2350	79	1.4	1.6	12.3	315	1.4	2.3	7150	1.4		2.7	106	
B. C.	10—1	2400	80	1.5	1.7	12.3	321	1.4	2.5	7670	1.4		3.0	98	
D. S.	10—4	2420	82	1.5	1.7	12.4	327	1.5	2.5	7470	1.4		3.0	103	
H. S.	10—5	2530	85	1.6	1.8	13.0	352	1.5	3.0	8000	1.4		3.2	101	
G. H.	10—9	2580	81	1.5	1.7	12.5	325	1.5	2.5	7570	1.4		3.1	103	
C. W.	10—10	2350	77	1.5	1.7	11.9	326	1.4	2.6	7830	1.3		2.9	103	
A. H.	11—3	2680	90	1.6	1.9	12.9	362	1.7	2.9	9160	1.4		3.0	115	
Average	10—2	2460	81	1.5	1.7	12.4	334	1.5	2.6	7930	1.4	1.1	3.0	103	76
H. S. for 10 wks.	10—5	2310	78	1.4	1.7	12.0	319	1.4	3.0	6790	1.2	1.0	2.8	98	74
Boys															
G. H.	8—3	2250	80	1.6	1.8	11.8	336	1.4	2.5	9290	1.2		3.1	111	
J. J.	8—8	2400	82	1.5	1.7	13.0	352	1.6	3.2	9970	1.4		2.9	115	
B. H.	9—0	2790	99	2.1	2.2	14.5	422	1.6	3.2	10,990	1.5		4.0	108	
G. B.	9—2	2290	84	1.8	1.8	12.3	354	1.5	2.6	10,830	1.3		3.4	122	
C. R.	9—3	2750	92	1.7	2.0	15.1	382	1.8	3.3	10,820	1.6		3.5	134	
A. Z.	9—4	2310	85	1.5	1.6	11.4	309	1.3	2.5	8330	1.2		2.9	107	
T. R.	9—5	2640	88	1.7	1.9	13.7	412	1.9	3.6	11,820	1.4		3.2	122	
E. D.	9—7	2350	77	1.5	1.6	11.9	311	1.4	2.6	7880	1.4		3.3	113	
R. J.	9—8	2620	87	1.5	1.8	14.2	350	1.7	3.1	10,970	1.5		3.2	127	
L. P.	9—11	2890	96	1.7	2.0	15.5	400	1.9	3.3	11,250	1.6		3.6	137	
B. C.	10—0	2470	84	1.6	1.8	13.1	341	1.6	2.6	10,690	1.4		3.3	126	
R. H.	10—1	2100	72	1.4	1.6	10.9	309	1.4	2.5	8630	1.1		2.8	96	
Average	9—4	2490	85	1.6	1.8	13.1	356	1.6	2.9	10,120	1.4	1.2	3.3	118	84
Average, boys and girls..	9—9	2480	84	1.6	1.8	12.8	346	1.5	2.8	9180	1.4	1.1	3.1	112	81
N.R.C. allowances.....	7 to 9 yr.	2000	60	1.0		10.0				3500	1.0		1.5		60
	10 to 12 yr.	2500	70	1.2		12.0				4500	1.2		1.8		75

a number of sources.[2] Since all the dietary essentials for which analytical determinations are available were computed, the study involved much cal-

[2] The values used for calculating calories, protein and salts were taken mainly from Rose's *A Laboratory Handbook for Dietetics* and the fifth edition of Sherman's *Food Chemistry*. The vitamin values were taken from a number of sources, chief of which were Sherman and Lanford's *Essentials of Nutrition*, Munsell's "Vitamins and Their Occurrence in Foods," unpublished tables compiled by Booher, and reports published in the *Milbank Memorial Fund Quarterly*.

unless they are especially tall or unusually active. These caloric intakes fell within the range of the allowances of the above-mentioned standard, namely, 2000 to 2500 calories for the ages 7 to 12 years.

The average protein intake was 84 gm., which is well above the standard allowance of 60 to 70 gm. for the ages 7 to 12 years. On the basis of weight, the intake was 2.6 gm. per kilogram. According to the results of nitrogen balance experiments, approximately 2 gm. protein per kilogram body weight is the minimum level for children of this age. Two and one-half grams per kilogram is apparently advantageous as many children in excellent condition have been found to be getting that much. The exact optimum intake is not known.

TABLE 3

Height, weight, age and percentage deviation of all subjects from Baldwin-Wood standard

SUBJECT	AGE	HEIGHT	WEIGHT	PERCENTAGE DEVIATION FROM STANDARD
	yr.—mo.	*cm.*	*kg.*	
Boys				
G.H.	8—3	130.9	28.2	−4.2
J.J.	8—8	130.4	28.6	−1.5
B.H.	9—0	131.8	32.2	+7.2
G.B.	9—2	128.8	26.2	−7.6
C.R.	9—3	134.9	32.4	+2.1
A.Z.	9—4	137.2	32.2	−1.7
T.R.	9—5	137.3	29.4	−10.7
E.D.	9—7	130.8	28.2	−4.6
R.J.	9—8	134.9	33.4	+5.4
L.P.	9—11	139.0	35.8	+5.0
B.C.	10—0	137.0	32.6	−1.3
R.H.	10—1	126.8	25.5	−6.0
Girls				
R.C.	9—2	136.8	31.2	−5.8
B.W.	9—4	142.3	31.7	−12.8
A.P.	9—7	135.9	31.5	−3.1
B.C.	10—1	135.0	31.6	−0.7
D.S.	10—4	140.3	33.4	−5.8
H.S.	10—5	135.6	39.0	+21.1
G.H.	10—9	141.5	37.7	+3.8
C.W.	10—10	143.4	33.4	−11.5
A.H.	11—3	147.5	43.3	+5.8
Average, boys and girls	9—9	136.1	32.3	
Average boys	9—4	133.3	30.4	
Average girls	10—2	139.8	34.7	

The average intakes of the minerals were as follows (*see* Table 2): calcium 1.6 gm., phosphorus 1.8 gm., iron 12.8 mg., magnesium 346 mg., copper 1.5 mg. and manganese 2.8 mg. The calcium intake was far above the standard allowance due to the large quantity of milk in the diet, while the iron intake was only a little above the allowance. The phosphorus was well above the usual standard of one gram. So little experimental work has been done on magnesium, copper and manganese requirements that it is difficult to know whether or not these amounts were adequate. Since the National Research Council has not as yet set standards for these minerals, it is necessary to refer to individual experiments for an estimate of the requirement. Daniels and Everson (4) have concluded that preschool children need 13 mg. magnesium per kilogram body weight. Since the children of this study were older and consequently needed less per kilogram, their average intake of almost 11 mg. per kilogram was probably sufficient. As for copper, Daniels and Wright (5) concluded that preschool children need 0.1 mg. per kilogram. These children were getting 0.05 mg. per kilogram. That this amount was sufficient for these older children seems probable because they had a satisfactory hemoglobin level. A good level could not have been attained if there had not been sufficient copper in the diet to allow for the use of iron in the formation of hemoglobin. In the case of manganese, Everson and Daniels (6) concluded that preschool children need at least 0.2 mg. per kilogram. The school-age children of this study were getting almost 0.1 mg. per kilogram. While they would not need as much as 0.2 mg. per kilogram, it is not certain that 0.1 mg. is sufficient.

The average vitamin A intake was 9180 I.U., which is twice the standard allowance of 3500 to 4500 I.U. for the ages 7 to 12 years. The average riboflavin content was 3.1 mg. or about twice the standard allowance. It was high because of the inclusion of 1.2 qt. milk per day which contributed about two-thirds of the riboflavin. After allowing for cooking losses, the thiamin intake was approximately 1.1 mg. and that of ascorbic acid approximately 81 mg. These were just a little above the standard allowances. Thus the average intakes for all the children were up to or above the standard allowances in every respect.

DISCUSSION

The main question, however, which the results of these calculations were intended to answer was whether each child was getting all he needed. An examination of Table 2 shows that the diet of every child was up to or above the allowances for his age in every respect. The diet of every child was excellent except that some of the children were not getting quite so many calories as is desirable, as indicated by the fact that they were not quite up to the standard weight.

Further evidence that this diet was a good one was demonstrated by the nutritive condition of the children who had been living on it for two years or more. There were more children (4 out of 21) in excellent nutritive condition, as judged by general appearance, than are found in the usual public school. From the heights and weights of all the subjects (Table 3), it will be noted that only 3 were

more than 10 per cent below the Baldwin-Wood standard. A study of the hemoglobin values and red cell counts was made as a part of the iron metabolism study. The hemoglobin values averaged about 13 gm., which is a satisfactory level. The red cell count averaged approximately 4,000,000 cmm., which is slightly low.

While this diet was excellent in all respects, it was not an expensive one. Low-cost fruits and vegetables were employed for the most part; breakfast cereals were oatmeal and home-ground wheat; and chicken and other expensive meats were served only occasionally.

It may be concluded from this study that if foods similar to those listed as having been made available to this group are served to children in amounts suited to the size and appetite of each child, enough of these foods will be eaten to furnish an adequate supply of all the dietary essentials, in almost every case.

ACKNOWLEDGMENTS

The author wishes to thank Dr. Lydia J. Roberts, Chairman of the Department of Home Economics and Household Administration, University of Chicago, and Dr. Ruth Blair of the same department, for their help and advice. The author wishes to express her gratitude also to the administrators of Mooseheart and to the Child Research Laboratory for permission to carry out this study at Mooseheart and for their fine cooperation.

REFERENCES

(1) JOHNSTON, F. A., AND ROBERTS, L. J.: The iron requirement of children of the early school age. J. Nutrition 23: 181, 1942.
(2) MCCLELLAND, B. E.: The length of the sampling periods in dietary studies. Master's Thesis, University of Chicago, 1931.
(3) Committee on Food and Nutrition, National Research Council. Recommended allowances for the various dietary essentials. J. Am. Dietet. A. 17: 565, 1941.
(4) DANIELS, A. L., AND EVERSON, G. J.: A study of the magnesium needs of preschool children. J. Nutrition 11: 327, 1936.
(5) DANIELS, A. L., AND WRIGHT, O. E.: Iron and copper retentions in young children. J. Nutrition 8: 125, 1934.
(6) EVERSON, G. J., AND DANIELS, A. L.: A study of manganese retentions in children. J. Nutrition 8: 497, 1934.

The Candy Habit

Even though the parents have succeeded in keeping the child free from the candy habit in the preschool period, they face the problem anew when he enters school. Temptation meets him on every hand. Other children have money for candy, and it may be sold in the school lunchroom or in the school corridors as a money-raising device, at nearby stores, or by street vendors at the schoolyard gate. The child would scarcely be human who did not succumb. Even if 5 or 6 years of not eating much concentrated sweet food have kept him from acquiring the candy habit, he soon develops this habit because of his natural desire to be like the other children. The result may be that he ceases to enjoy the bland foods in his normal diet, he eats less of these foods, and if the candy habit continues he may become undernourished.

The best slogan for the prevention of the candy habit is, "Out of sight, out of mind." Parents and teachers should unite to keep temptation out of the children's way—to banish candy from the school lunchroom, to prohibit the sale of candy on the school premises, to keep vendors away from the school gate, and if possible to regulate the sale of candy to children at local stores. This should be done quietly, without stressing the idea that something is being denied the children. When these steps are being taken special attention should be given to providing suitable substitutes. In the lunchroom some new and especially attractive desserts should make their appearance. Fruits such as apples, oranges, pears, bananas, figs, and dates should be sold at low prices.

Children should be taught the proper place of sweets in the diet. The facts to be taught about candy may be summed up as follows: Candy is not essential in the child's diet. It furnishes energy to the body but little else. It is primarily a flavor food and may be used in moderation for this purpose, provided it does not in any way reduce the consumption of the basic foods—milk, green and yellow vegetables, fruit, eggs, meat, potatoes, whole-grain cereals and bread—which are essential for good nutrition. The best rule for both parents and teachers to keep in mind is that the less candy the child eats, the better he is likely to be physically, especially in respect to his teeth.—*Roberts, Lydia J.: The Road to Good Nutrition. Washington: Children's Bureau, U. S. Department of Labor.*

A Method for the Evaluation of a Community Nutrition Program[1]

ANNETTE YOUNG, M.S.[2]

IN COMMUNITIES all over the United States far-sighted public health leaders are conducting nutrition programs. This has inspired many workers to develop methods of evaluating these programs as a means of measuring the effectiveness of teaching methods and proving to the community that progress is being made. One such was planned by the author and carried out in Richmond, Virginia, a city with a population of 220,000 people, during the period of January through June 1942. The method evolved is only one of several used to evaluate the program being conducted by the Richmond Nutrition Council with the cooperation of the Office of Defense Health and Welfare Services of the Federal Security Agency.

The usual method of evaluating a nutrition program includes the following: first, the need for nutrition education is determined; second, the program is planned and executed; third, the results are measured by an investigation to determine whether any improvement has been made in dietary habits. Often the surveys made before and after a nutrition program consist of the compilation of many dietary records kept for periods varying from a few days to a week or more. This method permits the food habits of individuals to be noted. However, its disadvantages become evident when it is necessary to determine the effects of an educational program upon large groups of people, all of which means heavy demands upon personnel to collect information, while much time is required to instruct people how to record the amount of foods eaten and to check and recheck the adequacy of their diets. Moreover, they may not report accurately what they have eaten. Nevertheless, this method has a definite place in a nutrition survey when substantiated by laboratory tests on the nutritional status of the individual. At the time this program was planned, however, the personnel to carry out such an evaluation was unavailable. Therefore, in order to obtain data which would indicate the effect of a nutrition education program in a city as large as Richmond, a different method of attack was used.

[1] Received for publication November 3, 1942.

[2] Miss Young, a member of the American Dietetic Association, is a graduate of the training course for student dietitians, University of Chicago Clinics, and received the Master of Science degree from the University of Chicago in 1940. She has been nutritionist for the Chicago chapter of the American Red Cross and at the time the study here reported was made, she was doing nutrition work on a volunteer basis at the Medical College of Virginia.

PROCEDURE

It was the hope of the author that a picture of the changes in food habits could be obtained from the point of view of food distributors rather than consumers. If consumer purchasing of protective foods showed a marked increase, it could be said that people had become more intelligently aware of nutritional values, provided that the population, wages, and prices and availability of food had not changed considerably. These just-mentioned factors, which could cause a distortion of the whole survey, were for the most part non-existent in the experimental area selected by the Nutrition Council in which to conduct an intensive program. The population of the experimental area was about 25,000. The city's remaining population was considered a part of the non-experimental area. Each area constituted a representative cross-section with regard to economic status.

The first step was to determine how many food distributors should be included in the study and how many of these would cooperate. A list of all retail and wholesale food distributors was obtained from the telephone directory. From 10 to 20 retail grocers were chosen in each section of the city, depending upon the number of such establishments in the section. The wholesale distributors selected included those having the greatest food distribution. The distributors were told the purpose of the study and were asked if they would be willing to cooperate. The organizations agreeing to participate included 3 large baking companies, 4 dairies, 4 food brokerages, 4 wholesale houses, one flour company, and 98 retail grocery stores. The retailers represented about one-fifth of the total number in the city. Eighteen of the organizations gave actual percentage increases or decreases in food sales over semi-annual intervals; the remaining 96 served only to indicate trends in consumer buying.

The second step was to devise questionnaires for

each group of food distributors. The two types of questionnaire used in obtaining the information are illustrated by Forms 1 and 2. Form 1 was used for food distributors who could submit percentage changes; Form 2, for those whose sales figures served to indicate trends in consumer purchasing.

The third step was to distribute the questionnaires, exercising due care to assure their return. To accomplish this, two nutritionists called on the managers of each concern in a position to submit

FORM 1

(Sample questionnaire for bakers)

Survey of consumer purchasing made by the Richmond Nutrition Council

Name of Company Address
Telephone Date

Per cent of various types of bread sold in Richmond during the month of June 1942 as compared with January 1942

KIND OF BREAD	PER CENT		COMPOSITION*
	Increase	Decrease	
White			
White, enriched			
Rye			
Whole wheat			
Cracked wheat			
Any other kinds			

**Note:* If bread has been assayed for minerals or vitamins, list these figures. If possible, give per cent of whole wheat flour used in whole wheat bread or cracked wheat bread, and the per cent of rye flour used in rye bread.

Comments: (If you would like to make any comments as to the possible reasons for an increase or decrease in the kind of bread sold, please do so in the space below). *This information will be kept confidential and will not be published as an individual report from any one company.*

Please return to:
By:

actual percentage figures on increases or decreases in sales. The purpose of the questionnaire and the nutrition education program were explained, also the fact that the name and figures submitted by any company would be held in confidence. In contacting the 98 retail grocers, the help of the Consumer Section of the Office of Civilian Defense, which in Richmond is the Housewives League, was enlisted. These volunteers, most of whom had completed a Red Cross nutrition course, were informed regarding the instructions to be given to the grocer, the best time of the day and week to interview him, and the importance of being tactful and patient if he happened to be busy. Groups of members of the Housewives League were then assigned to different sections of the city, with each volunteer responsible for three stores in the section of the city in which she resided and all visits to the grocers to be made within the same period of time. When the questionnaries were returned, they were separated

FORM 2

Consumer purchasing survey made by the Richmond Nutrition Council

Name of Store: Name of Volunteer:
Address: Address:
Telephone: Telephone:

Date:

Indicate by an "X":
if there has been a marked increase above usual for the following foods;
or if the food is selling as usual;
or if there has been a decrease in sales.

THIS MONTH AS COMPARED TO THE SAME MONTH LAST YEAR

FOOD	MARKED INCREASE	SELLING AS USUAL	DECREASE
Milk, canned			
bottled			
Oranges and grapefruit			
All other fresh fruit			
Dried fruit			
All canned fruits and canned fruit juices			
Tomatoes and tomato juice, fresh and canned			
Dried beans and peas (all kinds)			
Peanut butter			
Green and yellow vegetables			
All other fresh vegetables			
All canned green and yellow vegetables			
Eggs			
Cheese, bulk and package			
Potatoes, sweet and Irish			
Whole-grain cereals such as oatmeal, "Wheatena," "Ralston," "Shredded Wheat," "Wheaties," etc.			
Whole wheat flour			
Whole wheat bread, cracked wheat bread and rye bread			
Liver, kidneys, heart			
Fish			

Comments: If there has been any change in sales, please give your reason for it.

Return to:
By:

into the experimental and non-experimental groups. The purpose of the first questionnaire was to obtain information to use as a basis for judging the results of the intensive nutrition program soon to be under way in the experimental area.

The fourth step was to send follow-up questionnaires to the food distributors about six months later to determine the effects of the education program. The original and follow-up question-

naires were identical in form except that the consumption of foods which show seasonal variation was compared with the same month of the previous year, rather than the month in which the program was instituted. Some of the retail grocers did not return their questionnaires promptly in which case the nutritionist obtained the desired information by telephone.

The fifth step was to tabulate and chart the information collected from the two sets of questionnaires. The questionnaires giving actual percentage increase or decrease in sales were used for judging the changes in consumer purchasing throughout the city, since the companies who submitted this information did not restrict their sales to any one community or communities. The questionnaires which indicated trends only were used for evaluating the program in the experimental area as follows: first, the reports from the grocers in the experimental and non-experimental areas were compared; second, the two sets of reports from the grocers in the experimental area made before and after six months of nutrition education were compared.

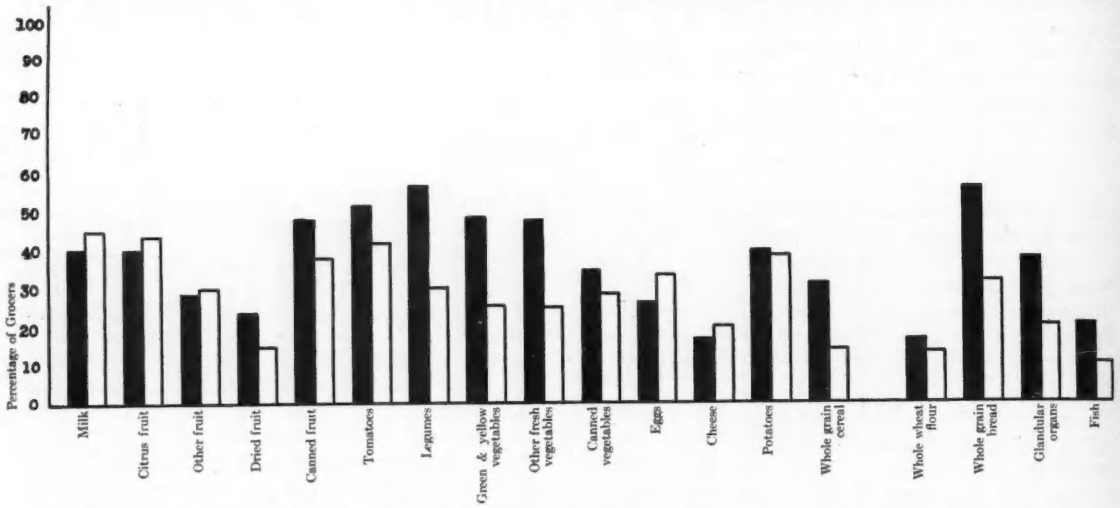

CHART 1. Percentages of grocers in experimental (black columns) and non-experimental (white columns) areas reporting marked increases in sales during January 1942 (compared with January 1941)

TABLE 1

*Trends in consumer purchasing in experimental and non-experimental areas based on percentage of retailers reporting sales increases or decreases in January 1942 (compared with January 1941)**

	MARKED INCREASE IN SALES		SELLING AS USUAL		DECREASE IN SALES		DO NOT SELL	
AREAS	Exp.	Non-exp.	Exp.	Non-exp.	Exp.	Non-exp.	Exp.	Non-exp.
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
Milk	40	45	60	48		7		
Citrus fruit	40	44	56	52	4	4		
Other fresh fruit	26	30	70	70	4			
Dried fruit	24	15	52	63	24	22		
Canned fruit	48	38	36	51	16	11		
Tomatoes	52	42	44	57	4	1		
Legumes	56	30	44	59		11		
Green and yellow vegetables	48	25	44	67	8	8		
Other fresh vegetables	48	25	48	72	4	3		
Green and yellow canned vegetables	40	27	56	70	4	3		
Eggs	26	34	50	44	24	22		
Cheese	16	21	72	68	12	11		
Potatoes	40	38	60	58		4		
Whole-grain cereals	32	14	64	78	4	8		
Whole wheat flour	16	12	48	38		11	36	39
Whole-grain breads	56	33	44	64		3		
Meat, especially glandular organs	36	20	56	56	4	8	4	16
Fish	20	11	40	40	12	3	8	46

* A total of 27 retailers were included in the experimental area and 71 in the non-experimental area.

RESULTS AND DISCUSSION

Evaluation of Data Obtained From the First Questionnaires. Those filled out in February 1942 indicated the trends in consumer purchasing during January 1942 as compared with the same month of the previous year (January 1941). Table 1 gives the percentage of retailers in both areas who noted various trends.

In evaluting the data, the author decided that an increase of less than 15 per cent in the number of retailers reporting a marked gain in the sales of a food did not constitute a significant difference between the two areas. With this in mind, analysis of Chart 1, based on Table 1, shows appreciable gains in sales of legumes, green and yellow vegetables, other fresh vegetables, whole-grain cereals and breads, and glandular organs in the experimental area, and in the non-experimental area no appreciable gains in sales.

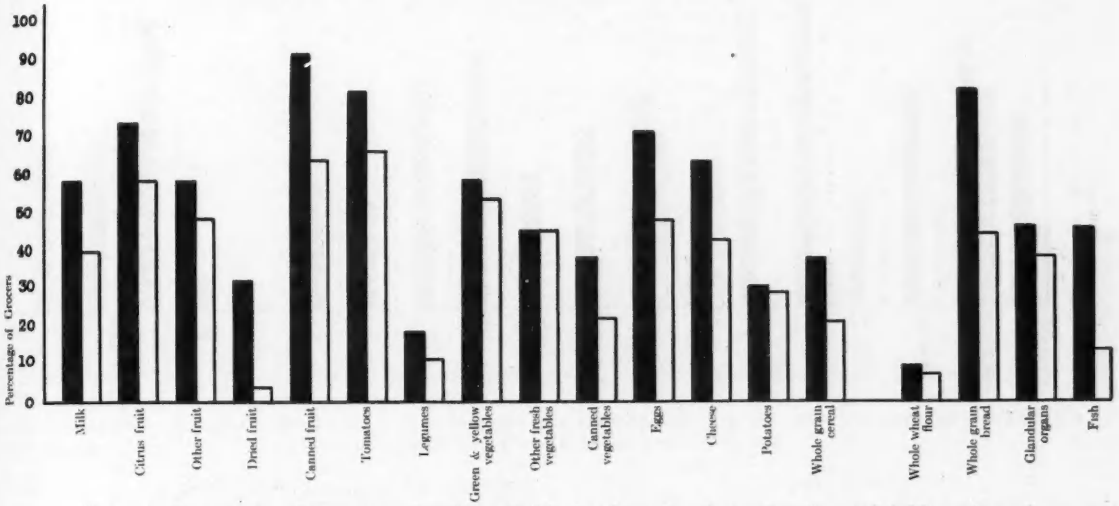

CHART 2. Percentages of grocers in experimental (black columns) and non-experimental (white columns) areas reporting marked increases in sales during June 1942 (compared with June 1941).

TABLE 2

Trends in consumer purchasing in experimental and non-experimental areas based on percentage of retailers reporting sales increases or decreases in June 1942 (compared with June 1941)

	MARKED INCREASE IN SALES		SELLING AS USUAL		DECREASE IN SALES		DO NOT SELL	
AREAS	Exp.	Non-exp.	Exp.	Non-exp.	Exp.	Non-exp.	Exp.	Non-exp.
	per cent	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*	*per cent*
Milk	59	40	32	54	9	6		
Citrus fruit	74	57	13	37	13	6		
Other fresh fruit	59	48	32	44	9	8		
Dried fruit	32	4	59	87	9	9		
Canned fruit	91	64	9	34		2		
Tomatoes	82	66	18	34				
Legumes	18	12	64	80	18	8		
Green and yellow vegetables	59	54	32	37	9	9		
Other fresh vegetables	50	50	41	39	9	11		
Green and yellow canned vegetables	37	23	50	73	13	4		
Eggs	71	49	25	46	4	5		
Cheese	64	44	36	56				
Potatoes	30	28	70	70		2		
Whole-grain cereals	37	21	41	71	22	8		
Whole wheat flour	9	8	59	34	4	2	28	56
Whole-grain breads	82	44	18	54		2		
Meat, especially glandular organs	46	39	46	40	4	2	4	19
Fish	46	17	50	26		9		48

Evaluation of Data Obtained From the Second Questionnaires. A second questionnaire, like that filled out in January, was submitted to retailers in July 1942 with the intent of demonstrating trends in consumer purchasing in June 1942 as compared with June 1941. Since some of the grocers were no longer in the same locations, only 22 of the original

27 in the experimental and 54 of the 71 in the non-experimental area returned their questionnaires. Table 2 shows trends in consumer purchasing as indicated by information on the questionnaires. The basis of comparison was the percentage of grocers in each area who reported these trends. Chart 2, based on Table 2, reveals most vividly the difference in sales between the non-experimental and experimental areas. From 6 to 38 per cent more grocers in the experimental than in the non-experimental area reported gains in the sales of evaporated and bottled milk, citrus fruit, dried fruit, canned fruit and fruit juice, tomato and tomato juice, legumes, eggs, cheese, whole-grain breads, and fish. The 6 per cent increase in the sales of legumes seems pertinent because a few grocers in the experimental area remarked that the usual decrease in sales of dried peas and beans during the late spring and summer had not taken place this year. In all fairness, it should be stated that a possible reason for the increase in sales of citrus fruit, dried fruit, canned fruit and fruit juice was the decreased consumption of sugar. However, the factor of sugar rationing affected all parts of the city alike. Therefore consumers in the experimental area who were buying more of the naturally sweet, protective foods were applying nutrition knowledge in a very practical way.

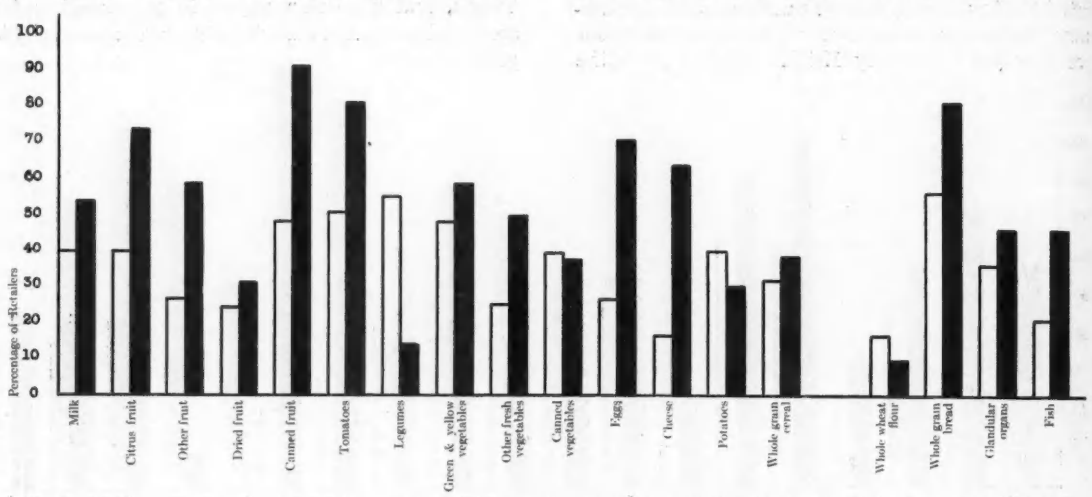

CHART 3. Percentages of retailers in experimental area who reported marked gains in sales before (white columns) and after (black columns) the nutrition program.

TABLE 3

Comparison of consumer purchasing in non-experimental and experimental areas after intensive nutrition program in latter

	PERCENTAGE OF RETAILERS REPORTING MARKED GAINS IN SALES				
	Experimental area		Non-experimental area		
	Before nutrition program	After nutrition program	Before nutrition program	After nutrition program	Difference between two areas
Citrus fruit	40	74	44	57	21
Other fresh fruit	26	59	30	48	15
Dried fruit	24	32	15	4	19
Canned fruit	48	91	38	64	17
Tomatoes	52	82	42	66	6
Legumes	56	18	30	12	−20
Green and yellow vegetables	48	59	25	54	18
Other fresh vegetables	25	50	25	50	0
Green and yellow canned vegetables	40	37	27	23	1
Eggs	26	71	34	49	30
Cheese	16	64	21	44	25
Potatoes	40	30	38	28	0
Whole-grain cereals	32	37	14	21	−2
Whole wheat flour	16	9	12	8	−3
Whole-grain breads	56	82	33	44	16
Meat, especially glandular organs	36	46	20	39	−9
Fish	20	46	11	17	20

In spite of an increase in the price of eggs, cheese, and milk, more consumers in the experimental than in the non-experimental area kept on buying these foods. The increase in the sales of whole-grain breads was conclusive proof that nutrition education brings results, for consumer buying of whole-grain bread is not determined by purchasing power. The small difference between the two areas in vegetable sales may have been due to the fact that more people in the experimental than in the non-experimental area had facilities for Victory Gardens and therefore bought less of these foods from the grocer.

The sales of enriched *vs.* non-enriched bread and flour were not compared on these questionnaires because the majority of grocers had not separated the two types in their minds when reporting their sales to the interviewers. However, more grocers

in the experimental than in the non-experimental area remarked that women asked for enriched bread and flour. Some grocers stated that they sold only enriched bread. From this data, it can be concluded that more grocers in the experimental than in the non-experimental area reported marked gains in sales of ten protective foods.

Table 3, based on figures taken from the questionnaires, (*see* Tables 1 and 2) gives the comparison of consumer purchasing of the various food items in the experimental and non-experimental areas, as shown by the reports of retailers who noted marked increases in sales of these specific items before and after the accelerated nutrition program in the experimental area. Analysis of Table 3 and Chart 3 shows that within the experimental area itself there was an increase of from 5 to 48 per cent in the number of retailers who reported an acceleration in sales of many food items during the nutrition program. Exceptions were a decrease of 38, 3, 10, and 7 per cent, respectively, in the number of grocers who reported marked gains in sales of legumes, canned vegetables, potatoes and whole wheat flour. After comparing the reports of the grocers in the experi-

TABLE 4

Comparison of percentage increase or decrease in the sales of foods by distributors

FOOD	JAN. 1942 AS COMPARED WITH JAN. 1941		JUNE 1942 AS COMPARED WITH JAN. 1941		JUNE 1942 AS COMPARED WITH JUNE 1941		NUMBER OF DISTRIBUTORS REPORTING	
	Per cent increase	Per cent decrease	Per cent increase	Per cent decrease	Per cent increase	Per cent decrease	Retail	Wholesale
Dairy Products								
Milk, evaporated	10				20		1	3
Milk, bottled*	10		12		8			4
Cheese, American	15				23		1	1
Cheese, cottage		5	12		7		1	2
Butter		8	25		18			4
Eggs	1			34		14	1	4
Ice cream	8		2		53			1
Bread, Flour and Cereals								
Enriched		14	35		35		1	3
Whole wheat	47		18		18		1	3
Cracked wheat	14		9		18		1	3
Rye	66		2		45		1	3
Oatmeal	32				32		1	2
Enriched flour	12		4		10		1	1
Whole wheat flour	13		13		10		1	1
Fruits and Vegetables								
Legumes, dried	35				30		1	
Legumes, canned	13				30		1	1
Orange juice, canned	55				55		1	1
Grapefruit, canned	16				16		1	1
Grapefruit juice, canned	23						1	1
Apples, canned	36						1	1
Tomato juice, canned		7			10		1	1
Tomatoes, canned	45				30		1	1
Greens, canned		13			20		1	2
Carrots, canned		21						1
Greens, fresh	40				30		1	4
Cabbage	20				30		1	4
Potatoes	10				20		1	4
Carrots	10				25		1	4
Turnips	40				30		1	5
Green pepper	10				25		1	4
Oranges					77		1	4
Grapefruit	10				62		1	4
Apples	3						1	4
Lemons					80		1	2
Meat								
Pork	12				12		1	3
Beef	20				20		1	3
Lamb	2						1	
Liver	21		20		35		1	
Heart			10				1	

* Includes whole milk, buttermilk, skim and chocolate milk.

mental and non-experimental areas, it was found that one to 30 per cent more retailers in the former than in the latter reported marked gains in sales for all but three protective foods—liver, whole-grain cereals, and green and yellow vegetables. An explanation has been given for the decrease in sales of green and yellow vegetables.

Two conclusions can be drawn from the data gathered from grocers during the nutrition program and correlated by the two methods described above: first, there were significant increases in the number of retailers who reported marked gains in sales of protective foods within the experimental area; second, the increases in sales reported for the majority of the foods was in favor of the experimental rather than the non-experimental area.

The information on actual percentage changes in sales obtained from food distributors, all but one of whom were wholesale dealers, shows the differences in consumer purchasing for the entire city of Richmond (*see* last paragraph under "Procedure") during the period of January 1941 through June 1942. The figures in each column (Table 4) were arrived at by using the average percentage decrease and increase in sales reported by all food distributors for a certain food, subtracting the smaller figure from the larger in each case. There was only one "protective" food for which no increased sale had been reported after six months of nutrition education, yet there had been at least seven foods so classified in the period preceding the program. The principal gains reported in June 1942, six months after the intensive program was started, were in the sales of milk, cheese, butter, ice cream, enriched bread and flour, whole-grain breads and cereals, legumes, fruits and vegetables, and meat, especially the glandular organs. Of particular interest is the notable increase in the sales of citrus fruit in June 1942 over June 1941. As stated previously, it was impossible to make a comparison of experimental and non-experimental areas from figures reported by these distributors since their sales were not confined to any one section.

In summarizing the data, it can be said that even though there were increases in sales of protective foods all over Richmond, the fact remains that during the intensive nutrition program there were marked gains in sales of protective foods within the experimental area itself. Moreover, it has been shown that grocers reported marked gains in sales for a greater number of the protective foods in the experimental than in the non-experimental area. These findings indicate that there had been an increase in the application of nutrition knowledge as a result of the nutrition program. However, it is only fair to point out that the apparent increase in the application of nutrition knowledge may have been partly due to sources originating outside of the community, such as the radio and publications. But even so, in the last analysis it is the individual and group work carried out in each community which will further, to a higher degree, the application of nutrition knowledge. This point has been proved by the results of the intensive nutrition work in the experimental area.

CONCLUSIONS

The advantages of this method of evaluating a nutrition program are:

1. It is a means of rapidly approximating the results of nutrition education on large groups of people when there is limited time and personnel. In normal times, the work involved could be reduced by eliminating the experimental and non-experimental areas, particularly in smaller cities where all sections of the community could be exposed to the educational program at the same time.
2. It stimulates interest on the part of both consumer and food distributor in the community by giving them a soundly practical method for judging progress.
3. It offers a means by which lay people who have taken Red Cross nutrition classes can assist in community nutrition work.
4. It eliminates the lengthy process of checking and rechecking many dietary histories.
5. It is applicable to villages, towns, and cities.

The disadvantages are:

1. The individual or family food habits can not be determined.
2. Major fluctuations in population, prices, wages, and availability of foods can distort the results.
3. It would be difficult to obtain a true picture of consumer buying from manufacturers and wholesale food distributors in a metropolis because of the city-wide distribution of food into all communities, some of which might not be conducting a nutrition program. However, large food companies can be of material aid in judging a nutrition program in several counties of a state or the whole state.

SUMMARY

A method for evaluating a community nutrition program is presented, based on consumer buying habits, which gives a more realistic picture in normal times than during a period of war economy since there would be fewer fluctuations in wages, population, food prices, and availability of certain foods. This method, which comprised surveys of experimental and non-experimental areas, was found to be an effective means of proving that nutrition education brings definite results in that the knowledge gained is applied in a practical way by means of increased purchasing of the protective foods.

ACKNOWLEDGMENTS

The author wishes to express appreciation for the suggestions made by members of the Nutrition Council, Richmond, and Eleanor Enright, Regional Director of Nutrition, Office of Defense Health and Welfare Services; for the assistance of the Housewives League, and Mrs. Frances Ferrell, in interviewing food distributors; and finally, to the food distributors for their generous cooperation.

Rehabilitation

The most widely recognized and discussed postwar need is the feeding of peoples, in many parts of the world. The appointment of Governor Lehman as American Director of Foreign Relief and Rehabilitation Operations made it clear that this particular "postwar" problem is an essential part of the conduct of the war itself. An Inter-Allied Committee on Postwar Requirements has already been at work, and doubtless these steps will soon lead to a United Nations authority for Relief and Rehabilitation. . . . The problem of nutrition is one aspect of a general program of health rehabilitation. The provision of water-supplies and facilities for waste disposal will present serious problems. Already typhus fever—that age-long camp follower in the wake of armies—is reappearing in the Vilna-Grodno-Bialystok triangle where it raged during the retreat of Napoleon, and again in 1921, and has been carried into Asia by refugees fleeing from the German terror. . . . When war is done, the drive for tanks must become a drive for houses. The drive for food to prevent the enemy from starving us must become a drive for food to satisfy the needs of all people in all countries. . . .

At an appropriate period, the emergency tasks of relief and rehabilitation and of the redistribution of refugees must be merged in a permanent world organization for social welfare—or what Sun Yat Sen in his great book on the Three Principles, calls "Livelihood." The freedom from want, like the freedom from fear, should be organized not only on a national, but also on an international basis. Basic minimum standards for sanitation, for medical care, for housing, for nutrition, for social security, must be definitely visualized—and at least approached—for all peoples if a stable world order is to be maintained. The United Nations do not, of course, propose to provide charitable upkeep for all persons. Food, or other gifts, is not the answer even for temporary relief. The purpose must be to aid human beings, now rendered helpless by economic interdependence and endangered by war, to help themselves. . . . The rationing system in England has leveled the opportunities to secure food and has given to poor people more nutritious food than they have ever had before. The establishment of an office of Foreign Relief and Rehabilitation Operations anticipates social rebuilding to extend far beyond the war period.—*The United Nations During the Period of Reconstruction. Third Report. The United Nations and the Organization of Peace, New York City, February 1943.*

The Vitamin A Value of Dehydrated Sweet Potatoes and Carrots[1]

FLORENCE I. SCOULAR, Ph.D., JEWELL E. BALLEW, M.S., CATHERINE J. CARL, M.S., and VERA DOZIER, M.S.[2]

VAST amounts of shipping and storage space for foods are now in demand as a result of the world crisis, and this space can best be saved by the widespread use of concentrated foods. Investigations have been made to determine the vitamin A value of fresh and dried samples of sweet potatoes and carrots by both the chemical and biological assay methods, but little has been done on dehydrated products. Fraps and Treichler (1) tested the Puerto Rico variety of sweet potatoes for loss of vitamin A value as a result of drying and found that the destruction of the provitamin amounted to approximately 29 per cent as compared with an 80 per cent loss in dried carrots. Munsell (2) stated that dried or dehydrated foods showed considerable loss in vitamin A value due to oxidation during the drying process. Lease and Mitchell (3), using a photo-electric calorimeter, computed the average content of sweet potato flour prepared from the Puerto Rico variety of sweet potatoes as 217 I. U. vitamin A per gram.

If the dehydration industry is to continue after the war there must be a market for the products as well as year-round employment for the employees. The retail trade will be an important outlet for such foods provided that the food-conscious housewife will demand the dehydrated product when indicated in preference to the canned or fresh. She will want to know, too, whether the dehydrated food is as "good" as the fresh before paying the higher price necessitated by its processing. In short, it is necessary that the public become thoroughly familiar with dehydrated foods before their acceptance can be very general.

THE "VITA YAM"

Familiarity with the commercially-dehydrated Puerto Rico variety sweet potato grown in Texas and known as "Vita Yam" is rapidly spreading through Texas, while people in general are becoming acquainted with the idea of the practical value of dehydrated sweet potatoes because the government has ordered great quantities of them for the armed forces and Lend-Lease. During wartime, especially, the sweet potato is important as a source of the provitamin A. Is the commercial product, "Vita Yam," a good source of this also?

The purpose of this study was to determine biologically the vitamin A value of four samples of commercially-dehydrated Puerto Rico sweet potatoes ("Vita Yam") and, for purpose of comparison, one sample of commercially-dehydrated carrots (variety not specified).

EXPERIMENTAL PROCEDURE

The biological method of assaying for vitamin A effect outlined by Sherman and Munsell (4) and modified by Swanson, Stevenson and Nelson (5) was used in obtaining the vitamin values herein reported. One change in the latter method was necessary because the stock[3] colony would not permit the use of the females alone. Consequently, three males and three females were used in obtaining the averages given. The growth rate of these animals was uniform due to previous inbreeding which was continued when the animals were moved to start the present colony. These animals were used in testing (for vitamin A) Samples I and II in 1940. The demand for animals suitable for research work in 1941 was such that it was necessary to obtain them from another source.[4] The only difference noted was a lower initial weight and a tendency to deplete in slightly less time. In order to ensure a minimum gain during the depletion period, "Clix" (a hydrogenated lard, furnished by the Cudahy Packing Company) was used since a smaller gain had been reported (5) when it was used as the fat in the basal diet. The growth increments during the depletion period were, however, as uniform as those of the stock colony rats. During both the 5 and 8-weeks feeding periods the vitamin A test supplement and reference

[1] This paper is based on data collected in connection with a larger project which has not been completed. Received for publication, April 5, 1943.

[2] Home Economics Department, North Texas State Teachers College, Denton.

[3] The original animals were obtained from Dr. Jet Winters of the State University of Texas and maintained on the same stock diet.

[4] Albino Stock Farms, Red Bank, New Jersey.

cod liver oil were used when Sample I was fed, although only the former is reported here.

Each sample of commercial, pulverized dehydrated Puerto Rico variety of sweet potatoes ("Vita Yam")[5] tested, all of which were obtained during 1940 and 1941, represented a composite sample of 5 one-pound cellophane-wrapped retail packages which had been thoroughly mixed. As "Vita Yam" is a commercial product nothing more definite is known about its background other than that the Puerto Rico variety of sweet potatoes used were harvested at the time stated and dehydrated immediately upon their arrival at the plant. Sample I consisted of sweet potatoes grown in Denton County, Texas, harvested in the early fall of 1939, which were dehydrated in June 1940; this illustrates the possibility of year-round production of "Vita Yam." Samples II and III were designated as "freshly harvested and dehydrated" during 1940 and 1941, respectively, because little time elapsed between the harvesting and the dehydration of the potatoes. These samples (II and III) therefore represented comparable products produced in successive years. Sample IV consisted of what remained of Sample II which was subsequently stored in a metal container at room temperature for a period of one year before testing. One sample of 1941 dehydrated carrots (variety not specified) was also used. It was observed that the dehydrated sliced carrots which were fed in one-gram supplements were easy for the rats to pick out of the dose cup and drop through the mesh of the cage to the pan below. Consequently, some of the sliced carrots were pulverized and fed at the same one-gram level. The dehydrated sweet potatoes were fed in amounts ranging from 0.5 to 1.5 gm.

The provitamin A of sweet potatoes exists primarily as carotene. Cod liver oil, however, was used in obtaining the reference growth-curve in order that the vitamin values for the dehydrated sweet potatoes could be read directly in international units. The reference cod liver oil,[6] which was diluted with cottonseed oil, was fed in graded amounts ranging from 50 to 228 I.U. The reference oil was administered to groups of rats from the same stock and at the same time that each sample of dehydrated food was fed. Therefore the gain in weight obtained with both the samples and the reference oil extended over a total period of two years.

DISCUSSION OF RESULTS

Although animals from two sources were used in obtaining the reference oil growth curve, they gave similar responses. Practically a straight line resulted from the feeding of increased amounts of reference cod liver oil. Consequently, it was possible to use this curve in reading the international units equivalent to the average daily growth made by the rats receiving the different samples of dehydrated sweet potatoes and carrots.

The vitamin A effect (expressed in I.U.) of the samples of dehydrated sweet potatoes and carrots is shown in Table 1. One gram of each of the freshly harvested and dehydrated Puerto Rico variety of sweet potatoes (Samples II and III) gave similar values, computed as 119 and 126 I.U. vitamin A respectively. Differences in the dehydration methods used may account for the higher value, 217 I.U. per gram, reported by Lease and Mitchell (2). Sample I, dehydrated sweet potatoes which had been stored for nearly a year before dehydration, gave a slightly higher value of 135 I.U. Undoubtedly this difference could be attributed to moisture loss during the storage period since no attempt had been made to prevent it. Sample IV, which was the same as Sample II except that it had been stored for a period of a year at room temperature, showed a significant loss of vitamin A, namely 16.81 per cent. This loss may not be comparable to that, if any, which occurs when an unopened retail package is held from one year to the next, but it does suggest the decrease in vitamin A values to be expected when an incompletely used package is stored in the home under similar conditions.

TABLE 1

International units vitamin A furnished by 4 samples dehydrated sweet potatoes and one sample dehydrated carrots

VEGETABLE	SAMPLE	AMOUNT FED	AVERAGE DAILY GAIN	VITAMIN A
		gm.	*gm.*	*I.U.*
Dehydrated sweet potatoes	I	1.0	1.56	135
		1.5	1.96	173
	II	0.5	0.64	54
		0.7	0.99	84
		1.0	1.36	119
		1.5	2.15	192
	III	1.0	1.46	126
	IV	1.0	1.17	99
Dehydrated carrots	Sliced	1.0	2.11	187
	Pulverized	1.0	2.23	197

The difference in the vitamin A effect of the two forms of the one sample of dehydrated carrots is evidently due to cage loss of the carrot pieces which were more easily wasted than the pulverized. One gram of the latter gave 197 I. U.

From the above results, one might conclude that pulverized dehydrated carrots were superior to the pulverized dehydrated Puerto Rico sweet potatoes as a source of vitamin A. It is necessary, however, to consider first the amount of the fresh vegetable required to produce a given amount of the dehydrated product. According to Wilson, Masters, and

[5] Courtesy of the Gilbert C. Wilson Laboratories, Denton, Texas.

[6] U. S. Pharmacopeia cod liver oil obtained from Professor E. Fullerton Cook, Philadelphia.

Carrico (6), 3⅓ lb. of the raw Puerto Rico variety of sweet potatoes is necessary to produce one pound of the dehydrated product, while it takes 12 lb. of fresh carrots to make the same amount of concentrated food.[7] Yet the dehydrated carrot is not four times richer in vitamin A value than the sweet potato.

Many palatable dishes have been prepared in this laboratory using the pulverized dehydrated sweet potato. The availability of sweet potatoes for dehydration in the southern states suggests that the use of such products will not end when war needs diminish; the civilian population will have become accustomed to them and will continue their use because of the high vitamin A content.

SUMMARY

The vitamin A value of pulverized dehydrated Puerto Rico variety of sweet potatoes and of dehydrated carrots was determined biologically.

One gram each of the 1940 and of the 1941 freshly harvested pulverized dehydrated sweet potatoes gave similar vitamin A values, 119 and 126 I.U., respectively.

The Puerto Rico variety of sweet potatoes harvested in 1939 and dehydrated in June 1940 gave the highest vitamin A value obtained in this study, namely, 135 I.U. per gram.

Storage of the 1940 dehydrated product at room temperature for a year showed a 17 per cent decrease in the vitamin A value, namely, 99 I. U. per gram.

Pulverized dehydrated carrots gave 197 I.U. vitamin A per gram. This higher value is due in part to the fact that four times as much of the fresh product is required to produce a pound of dehydrated carrots as is required to produce the same amount of dehydrated sweet potatoes.

The pulverized dehydrated Puerto Rico sweet potatoes made from the freshly harvested vegetable apparently give a fairly uniform product from year to year and thereby furnish an easily obtained and constant source of vitamin A.

[7] Personal communication from Everett Scogin, co-worker of Gilbert C. Wilson.

REFERENCES

(1) Fraps, G. S., and Treichler, R.: Losses of vitamin A in drying fresh carrots and sweet potatoes and canned spinach. J. Agric. Research 47: 539, 1933.

(2) Munsell, H. E.: Vitamin A methods of assay and sources in foods. J. A. M. A. 111: 245, 1938.

(3) Lease, E. J., and Mitchell, J. H.: Biochemical and nutritional studies of dehydrated sweet potato. South Carolina Agric. Exper. Sta. Bull. 329: 12, 1940. Clemson Agricultural College, Clemson, South Carolina.

(4) Sherman, H. C., and Munsell, H. E.: The quantitative determination of vitamin A. J. Am. Chem. Soc. 47: 1639, 1925.

(5) Swanson, P., Stevenson, G., and Nelson, P. M.: A method of increasing precision in vitamin A assay. J. Nutrition 15: 103, 1938.

(6) Wilson, G. C., Masters, W. N., and Carrico, J. L.: Industrial possibilities of the sweet potato. Teachers College Press Bull. 1: 14, 1939. North Texas State Teachers College, Denton.

Measuring Cooking Losses

There is at present a nationwide interest in cooking vegetables in such a manner as to conserve their mineral and vitamin content, but there is also much confusion regarding the method to be followed in accomplishing this purpose. The reason for this confusion is the lack of definite information on the subject, which, in turn, is owing to the fact that no comprehensive study of losses has been reported for the four commonly used methods—cooking in water to cover in an open kettle, cooking in a small quantity of water in a closed kettle, steaming, and cooking in the pressure saucepan. The difficulties involved in carrying out such a study are many. The first problem encountered is in sampling, owing to the lack of uniformity in the composition of vegetables. Such possible variation in composition of necessity complicates the sampling in preparation for cooking, since one cannot be sure that the portions of vegetable selected for the various methods have the same original composition. Such being the case, it would be easy to draw erroneous conclusions from any one experiment and attribute the differences found in the cooked product to the method of cooking, when, as a matter of fact, it might, in part at least, have been due to differences inherent in the samples taken. The way to get around this difficulty, of course, is to repeat the whole procedure enough times to rule out the sampling error.

Furthermore, even if uniform samples can be obtained, there is the possibility of loss, owing to oxidation of ascorbic acid, perhaps also of some of the other vitamins, if there is any appreciable variation in the temperature and time of holding before and after cooking. Finally, there is the very considerable difficulty in making sure that all samples are cooked to the same degree of doneness. . . . Not until these several difficulties are met and conquered, and many samples from the same lot of vegetables cooked by each method, can one say with certainty what is the best method for conserving the nutrients of any given vegetable.—*Halliday, E. G. and Noble, I. T.: Food Chemistry and Cookery. Chicago: The University of Chicago Press, 1943.*

Some Mineral Constituents of the Edible Portion of Scuppernong Grapes[1]

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THE Scuppernong, a familiar table grape in the South Atlantic States, is probably the oldest cultivated variety of native American grape (1). A variety of *Vitis rotundifolia*, it is perhaps the most popular member of the Muscadine group and the only white member of this group produced commercially. Because of the widespread use of the Scuppernong as a table grape, a knowledge of its mineral content seemed of value.

Much of the work on grapes heretofore has been done on their sugar and acid content rather than mineral constituents. Among the researches published on the mineral content of grapes are those of Bioletti (2) on California grapes, Alwood and coworkers (3, 4) on grapes of the central and eastern states and König (5) on German grapes. Bioletti and Alwood reported on the minerals of the whole grape; König, separately, on the skin, seed, and juice. Pozzi-Escot (6) showed the presence of iron in certain Peruvian grapes and Morgan (7) determined the calcium and iron content of grapes. Myers, Brunstetter, Dix and Magoon (8), and Brunstetter, Myers, Dix and Magoon (9) determined the mineral content of the leaves of several varieties of grapes.

Analyses specifically on the Scuppernong are those of Alwood (10) on total solids and reducing sugars, Bell, Yarbrough, Clegg and Satterfield (1) on the ascorbic acid content, and Kramer and Satterfield (11) on the ascorbic acid content of Scuppernong wine. There seem to be, however, no previously published data on the mineral content of this grape.

[1] This study was aided by a grant from the North Carolina State College Research Fund. Received for publication, April 5, 1943. Submitted by Margaret Kramer in partial fulfilment of the requirements for the Master of Science degree, North Carolina State College of the University of North Carolina.

EXPERIMENTAL PROCEDURE

The samples of Scuppernongs were picked in the vineyards of the North Carolina State College of Agriculture and Engineering during September 1939. They were culled to ensure uniformity of ripeness, washed with distilled water, and then air-dried as rapidly as possible to prevent leaching.

The washed grapes were squeezed by hand, the seeds and skin being separated from the pulp and juice during the process. The pulp and juice, hereafter to be called "edible portion," were squeezed onto weighted watch glasses. It will be recalled that most of the other work done on grapes has been done on the juice or whole grape, not on what we have defined as the edible portion.

The grape samples were then dried according to methods prescribed by A.O.A.C. (12) in order to determine the moisture content. When a sufficient number of samples had been so treated, the remainder of the grapes used were merely collected on flat porcelain pans and dried. The total accumulation of dried grapes was stored in bottles until ashed.

Portions of the stored samples were redried and ashed in platinum crucibles in a muffle at a temperature not exceeding dull redness. No difficulty attended the ashing; the organic matter disappeared completely, leaving a light green ash.

The total ash samples were combined and ground in a mortar until the mass was reduced to a fine powder with no large aggregates. From this, three samples were weighed and analyzed for calcium, magnesium, iron, aluminum, and manganese. The analyses were made in accordance with established procedures for plants (12). The chloride content was run on separate samples of the ash. The method was essentially that of Volhard as modified by Myers (13) for determining chlorides in blood.

The phosphorus content was determined on the dried grapes which were ashed according to the nitric-perchloric acid method of Gieseking, Snider, and Getz (14). The phosphorus was then run colorimetrically.

The results of the various determinations are given in Table 1.

TABLE 1

Average mineral composition, ash, and moisture content of the edible portion of the Scuppernong grape

WEIGHT BASIS	MOISTURE	ASH	CaO	MgO	Fe_2O_3	Al_2O_3	Cl	Mn_3O_4	P_2O_5
	%	%	%	%	%	%	%	%	%
Ash ..			5.55	3.20	1.644	4.00	2.390	trace	
Dry ..		1.67	.065	.037	.020	.047	.028	trace	.143
Fresh.	84.83	.177	.012	.006	.003	.007	.004	trace	.022

DISCUSSION

It is obvious from the tabulated results that the edible portion of the fresh Scuppernong cannot be considered a good source of any of the minerals determined. For example, if the grapes were to be used as the sole source of calcium, 27 pounds of the grapes would be required per day.

It is conceivable that the mineral content can be enriched to some extent by varying the type of soil on which the vines are grown and by carefully selecting the type of fertilizer. The grapes used in this study were grown on Cecil sandy loam, with fertilizer type 5-7-5 N-P-K. These factors probably account for the high percentage of phosphorus found.

The investigations of Bioletti (2), Alwood (3, 4), and König (5) on grapes seem to indicate that much of the mineral content is in the hull, not in the edible portion. Morgan (7) has calculated that grapes supply an average of only 3 per cent of certain of the daily nutritive requirements of adults.

The manganese content is reported as "trace" because the method used for its determination was not adapted to the small amounts found.

SUMMARY

1. The moisture, ash, calcium, magnesium, iron, aluminum, chloride, manganese, and phosphorus content of Scuppernong grapes was determined.

2. The edible portion of this grape (pulp and juice) is not a rich nutritive source of the minerals determined.

ACKNOWLEDGMENT

We are grateful to Professors M. E. Gardner and J. G. Weaver of the Department of Horticulture, North Carolina State College, for the grapes supplied and for the use of several pieces of equipment.

REFERENCES

(1) Bell, T. A., Yarbrough, M., Clegg, R. E., and Satterfield, G. H.: The ascorbic acid content of seven varieties of Muscadine grapes. Food Research 7: 144, 1942.

(2) Bioletti, F. T.: The ash of grapes. University of California Exper. Sta. Rep.: 322, 1892–1893.

(3) Alwood, W. B., Hartman, B. G., Eoff, J. R., Ingle, M. J., and Sherwood, S. F.: Development of sugar and acid in grapes during ripening. U. S. D. A. Bureau of Chemistry Bull. 335: 1, 1916.

(4) Alwood, W. B., Hartman, B. G., Eoff, J. R., Sherwood, S. F., and Carrero, J. O.: The chemical composition of grapes grown in central and eastern states. U. S. D. A. Bureau of Chemistry Bull. 452: 1, 1916.

(5) König, J.: Chemie der Menschlichen Nahrungs-Und Genussmittel 2, p. 880. Berlin: Julius Springer, 1920. (From Winton: Structure and Composition of Foods, Vol. II, p. 767.)

(6) Pozzi-Escot, M-Emm.: Preliminary investigation on the presence of iron in Peruvian grapes. Rev. de cien. méd. 40: 293, 1938.

(7) Morgan, A. F.: A nutritive index of fruits. Fruit Prod. J. 21: 75, 1941.

(8) Myers, A. T., Brunstetter, B. C., Dix, I. W., and Magoon, C. A.: A quantitative spectrographic determination of eight elements in the young leaves of the Delaware grape. Proc. Am. Soc. Hort. Sci. 37: 645, 1939.

(9) Brunstetter, B. C., Myers, A. T., Dix, I. W., and Magoon, C. A.: A quantitative survey of eight mineral elements by a spectrographic method and of total nitrogen in young leaves of twenty-five varieties of American grapes. Proc. Am. Soc. Hort. Sci. 37: 635, 1939.

(10) Alwood, W. B.: Ecological studies. U. S. D. A. Bureau of Chemistry Bull. 145: 1, 1911.

(11) Kramer, M., and Satterfield, G. H.: The ascorbic acid content of four varieties of raw wines. Food Research 7: 127, 1942.

(12) Association of Official Agricultural Chemists: Official and Tentative Methods of Analysis, pp. 121–132, 486–505, 1935.

(13) Myers, V.: Practical Chemical Analysis of Blood, p. 140. St. Louis: C. V. Mosby Company, Inc., 1924.

(14) Gieseking, J. E., Snider, H. J., and Getz, C. A.: Destruction of organic matter in plant material by use of nitric and perchloric acids. Indust. & Engin. Chem. Anal. 7: 185, 1935.

Daily Diet Requirement

I should like to emphasize the necessity of eating adequate amounts of certain essential types of food regularly, else the nutritional state is affected. Do you realize that if a green or colored vegetable is not eaten each day, it will be almost impossible to get a sufficient supply of vitamin A? Do you realize that if about twenty ounces of milk a day is not in the diet, it is almost impossible to get a sufficient supply of riboflavin? Do you realize that if enriched bread or whole grain cereal is omitted from the daily diet, it is almost impossible to get an adequate supply of thiamin? Do you realize that if three or four ounces of citrus fruits or double that amount of tomato juice is not consumed each day, it is almost impossible to get an adequate supply of vitamin C?—*Tisdall, F. F.: Round-Table Discussion on Nutrition in Industry, Twentieth Annual Conference, Milbank Memorial Fund, 1942.*

Editorial

RED CROSS VOLUNTEER DIETITIAN'S AIDE CORPS

One of the most practical answers to the problems of the overburdened administrative hospital dietitian in this day of labor shortages and point rationing perplexities is the organization of a Red Cross Volunteer Dietitian's Aide Corps.

On April 9, 1943 word was received from Melva B. Bakkie, director, Nutrition Service, American Red Cross, that administrative approval for the organization of such a corps had been granted. (*See* page 368 of this JOURNAL for May.) This means that the Red Cross Nutrition Service will cooperate in the recruiting of volunteers, through local Red Cross chapters, to aid in hospital dietary departments. It is expected that many of the volunteers will be recruited from the 300,000 women who have already completed the 20-hour Red Cross standard nutrition course (completion of which "or its equivalent" is a requisite), many of whom have been eager for specific assignments. In addition to the Red Cross nutrition course, 40 hours of special training, including 15 hours of supervised practice work under graduate dietitians will be required of volunteers. The course should be given over a period not longer than 8 weeks, or less if possible. Applicants must agree to serve a minimum of 150 hours, preferably in a 3-month period, with a minium service of 3 hours a day, and be free to accept assignments at hospital meal hours. Presumably, too, the aides will be of assistance even while in training and they will be on call for service in emergencies "for as long a period of time as needed" even after the minimum of 150 hours has been completed. The establishment of the corps also means that uniform standards for training, duties, and supervision have been approved, thanks to the efforts of Miss Bakkie and a committee of the War Activities Council of the American Dietetic Association, under the chairmanship of Margaret Gillam, which assisted in formulating these standards.

Details regarding the organization and administration of the Red Cross Dietitian's Aide Corps and the Instructor's Outline for the course have been sent to all chapters. Therefore only information of interest to dietitians regarding preliminary arrangements for establishing a corps is repeated here: A volunteer dietitian's aide committee, composed of professional and lay people, is to be set up in each chapter where there is need for a corps, the membership to include, among others, a representative from a local dietetic association, a representative from each hospital dietary department to be used as a training center, and a representative from each hospital dietary department which uses the services of the aides. Among the duties of the committee are: deciding the number of aides to be trained according to the needs and demands of local hospitals, interviewing applicants, assigning aides to hospitals and providing substitutes when aides cannot fill their assignments, and safeguarding standards during the service of the aides in hospitals. Hospitals used as training centers as well as those using the services of the dietitian's aides, must be registered with the American Medical Association or the American College of Surgeons. The list of duties of volunteer aides given in the official instructions is subject to the approval of the individual hospital administration; it is suggested that they perform only those duties which are under the direct supervision of the dietitian.[1]

The Volunteer Special Services have authorized attractive commando blue uniforms with the Volunteer Dietitian's Aide Corps bar and enrollment pin. If the dietitians who interview applicants can make the work itself sound equally appealing, as well as important as a service to the nation in wartime, the quotas for each hospital should be quickly filled.

The trained volunteer dietitian's aide should prove of great practical assistance to dietitians during this period of acute shortage of manpower. It should be assumed, therefore, that all dietitians will heartily cooperate with the program. Unfortunately, however, there are always a few dietitians who balk at anything new, and these sometimes are the most articulate. They will be likely to say that they do not want to "bother teaching the course," that they "haven't the time." True, it will take some of the already hard-pressed dietitian's time to conduct the course, but the return in help and in community response should more than repay her for her effort. A man prominent in the field of hospital administration called at the Red Cross Headquarters in Washington recently to learn about the proposed program for training volunteer dietitian's aides. He expressed the hope that dietitians would not feel that

[1] *See* news item in this JOURNAL regarding the outline of the course for dietitian's aides.

they were too busy to give the time for the training program. His comment was something like this: "The nursing profession at first resented the training of nurse's aides. Not only have these aides proved their usefulness, but they have acquired an appreciation of the work of the nurses, and down to the last nurse's aide they are loyal to the standards of the nursing profession. The dietitian is a relatively new professional worker in the medical field, and the public needs to know something of her professional standards. The dietitian's aide, as an intelligent, supplementary worker in the dietary department, will acquire this appreciation and pass it on to the community."

Dietitian aides will be extremely helpful during the present emergency. Their worth has already been proved, judged by the comments of dietitians which appear elsewhere in this section. In the long view their value cannot be overestimated. This is an opportunity, too, to make the community aware of the functions and capabilities of the hospital dietitian. The development of an intelligently interested group of laywomen in the community will be of great help in the future when dietitians may wish to widen the scope of their work. An understanding and appreciation of some of the problems of administrative food work will make for backing when pertinent legislation is being considered. The careful training and proper use of dietitian's aides will form a nucleus for a permanent cooperative group in the community. The dietitian has led a cloistered life too long; she must now and in the future bear her share of programs concerned with public welfare. We must not fail to make the program of dietitian's aides as successful as that of the now well-established nurse's aides.

CONSTITUTIONAL CHANGES

The growth of the American Dietetic Association, the enlarged concept of the work of the dietitian, and the unprecedented opportunities for service, both as individuals and as an Association, make a study of our organization imperative. With this thought in mind, Nelda Ross, as President, in 1942 appointed Anna M. Tracy chairman of a Reorganization Committee to consider means by which the Association could better meet present and future needs.

At the February meeting of the Executive Board, Miss Tracy presented her committee's recommendations which were discussed in the light of the recommendations of the Membership and Finance Committees. After careful deliberation, certain major changes were recommended and endorsed by the Executive Board and in order that these changes could be widely discussed a summary was sent via the May A. D. A. *Courier* to state presidents, delegates of state associations, presidents of local associations and all chairmen of national committees. Every member of our Association, however, is concerned with the pattern of the organization. If we, as an Association and as individuals, are to function most effectively during the present emergency, each member must sense her responsibility to the Association in the task before us. That every member may be fully informed concerning the major changes which have been proposed, it was considered desirable to outline these in the JOURNAL.

The major changes that seem indicated and a discussion of each follow:

1. Clarification of membership requirements.
2. "Diet Therapy Section" to be renamed "Nutrition Section."
3. Increase in annual membership dues.
4. Development of the House of Delegates as legislative body of the Association.

1. *Clarification of Membership Requirements.* With regard to academic requirements, the Constitution now reads: "(1) A bachelor's degree from an accredited college or university with a major in foods and nutrition or institution management which is recognized by the Executive Board; or (2) a bachelor's degree from an accredited college or university followed by courses to complete a major in foods and nutrition or institution management which is recognized by the Executive Board."

It is recommended that the above be qualified by the following statement: "If an applicant has not been actively employed within the last seven years in a position, one of the precise requirements of which was that she be fully informed on the newer knowledge of nutrition, five semester credits in nutrition or related sciences, received within the last seven years, will be required."

With regard to experience, the Constitution now reads: "Subsequent to the completion of the foregoing educational requirements each active member shall have had experience as follows: (1) Satisfactory completion of a course in applied nutrition or institution management approved by the Executive Board; or (2) at least two years of successful dietetic or nutrition experience in a position of responsibility in a hospital, cafeteria, dormitory, lunchroom, hotel, or similar field approved by the Executive Board; or (3) at least two years of successful experience in teaching such professional subjects as dietetics or nutrition or foods or institution management; or (4) at least two years of successful experience in community or clinic education work in foods and nutrition; or (5) at least two years of successful experience as foods, nutrition, or equipment adviser to an organization or publication; or (6) published original investigation in foods, nutrition, or institution management."

It is recommended that requirement 1 remain unchanged; that requirement 2 be changed to read, "At least *three* years of successful dietetic or nutrition experience in a position of responsibility in a hospital, cafeteria, dormitory, lunchroom, hotel or similar field approved by the Executive Board; *at least one year of this experience must be supervised experience and varied in type to include all phases of applied dietetics included in an approved student course.* Under requirement 3, the word "teaching" shall be qualified by the phrase "at college level." Here, as in requirements 2, 4 and 5, it is recommended that the "two years" be increased to "three years."

The above-mentioned changes are recommended to safeguard the high standards of the Association, membership in which is now recognized as the hall-mark of a dietitian. The American College of Surgeons, the National League of Nursing Education, the American Hospital Association, the United States Civil Service Commission, and the Office of the Surgeon General recognize membership in the American Dietetic Association as the *sine qua non* of the qualified dietitian. Each of these organizations recommends that "the dietitian be a member of the American Dietetic As-

sociation." With such confidence placed in our membership standards, we must see that no poorly qualified, inexperienced or professionally "rusty" applicants are accepted for membership. Successive Membership Committees have worked faithfully on this assumption and have conscientiously protected the Association's membership standards. This they have been able to do because the Constitution so provides. Membership Committees have refused to recommend an applicant whose formal education was not sufficiently recent or whose experience failed to meet accepted standards. This adherence to a principle has occasionally caused embarrassment to the committee. A definite statement in the Constitution would not only protect our standards but simplify the work of the Membership Committee.

2. *"Diet Therapy Section" to be Renamed "Nutrition Section."* "Nutrition" in the broader meaning of the word embraces more of our modern concept of the work of the dietitian than the somewhat narrow term "diet therapy." More of our members would be interested in the studies and activities of a Nutrition Section than in one titled Diet Therapy. Dietitians, even those engaged solely in the therapeutic application of nutritional knowledge, must, of course, be fully informed with regard to the patient's "normal" nutritional needs.

3. *Increase in Annual Membership Dues.* It is recommended that the annual dues be increased from $5.00 to $7.50 yearly. For several years an increase in dues has been considered. Now it seems imperative. The present dues, which include a subscription to the JOURNAL, are no longer sufficient to balance the budget. It has been considered advisable to appoint an Executive Director in order to provide greater continuity in section activities and in relationships with federal bureaus and agencies, and to develop a program of public relations which would draw attention to the significance of the dietitian in a plan designed "to improve the nutritional status of human beings." When the Association was smaller in number and in scope, it was possible for the elective officers to carry much of the routine work. Each officer gave most generously of her time, and the organization by which she was employed was obliged, perforce, to forego a considerable amount of her time during her term of office. Now that the Association work is so much heavier, and so many avenues of approach must be developed, it is not possible for the elective officers to carry this increasing load. It was the unanimous opinion of the 1941–42 and 1942–43 Executive Boards that an Executive Director should be appointed.

The JOURNAL has been increased from four to six, to eight, ten, and finally to twelve issues a year. The growth of the Association requires larger office space. The rise in the cost of living necessitates increases in the salaries of office employees. It may be necessary for the Association to assist in the financing of the expenses of the delegates of state associations to the meeting of the House of Delegates. The Executive Board voted to accept the recommendation of the Finance Committee that the dues of members on overseas service be waived for the duration, without change in membership status.

4. *Development of the House of Delegates as Legislative Body of the Association.* The following is proposed: (1) The House of Delegates shall be the legislative body of the American Dietetic Association. Except for election of officers, which shall be done by ballot by mail, the meeting of the House of Delegates shall take the place of the annual business meeting. (2) The House of Delegates shall be made up of the following:

(a) Delegates from affiliated state associations. Each affiliated state association shall be allowed one delegate plus one additional delegate for each 50 active members of the state association. This figure shall be based on the membership roll as of March 1 of each year, and shall be checked in the office of the Association. Delegates shall be elected for two years and may be re-elected. Any state association which is permitted more than one delegate shall elect one-half of its representatives on alternate years.

(b) The national officers.

(c) Members of the Executive Board.

(3) The President of the American Dietetic Association shall preside at the meeting of the House of Delegates. The Secretary of the Association shall act as secretary of the meeting. All active and associate members of the Association shall be privileged to attend the meetings of the House of Delegates, but only the delegates, the national officers and members of the Executive Board shall be permitted to vote.

When the House of Delegates was organized five years ago very little authority was given to this body. Now that its organization has been sufficiently perfected a definite plan for increasing its authority should be considered. Before the House becomes the legislative body of the Association, there must be provision for numerical representation of the membership. Based on the present A.D.A. membership in states, the plan suggested would bring the House of Delegates up to about 122. Such a ruling would no doubt stimulate state membership, since membership in the state association would be required if representation in the government of the A.D.A. is desired. Thus the state associations would be strengthened in numbers and enjoy more active participation in the government of the national Association. The functioning of the House of Delegates as the legislative body, made up of representatives of affiliated state associations, would undoubtedly encourage the organization and affiliation of associations in other states.

Perhaps this plan seems revolutionary. In practice it would not be. It is similar to the type of organization used by other national associations. The delegates would be chosen because of their conscientious interest in their professional association, and would come to annual meetings with a background of information and thoughtful interest in the business of their association that is not always evidenced by the average member. A delegate elected to represent the state association would have a feeling of responsibility and concern regarding the business transacted at the meeting. The plan would encourage more active participation in the business of the Association and better representation than is true under our present setup. The delegates would frequently be chosen from the more mature members of the state associations which would tend to bring into the foreground of the national Association many local leaders who previously had not taken an active part in national affairs. In states where a number of delegates are elected, some younger members of the Association could be included in the group. This would make for the development of future leaders.

The statement that "dietitians move around so much, there would be no continuity in representation in the House" is a misstatement. Young dietitians, like most beginners, flit about, but the more mature settle into a job and grow with it. Eight, ten or twelve years in one position is usual rather than unusual. It is to be expected that many of the delegates would be chosen from this mature group.

There may be need for some financial arrangement in regard to meeting the expenses of delegates to meetings. It might be left entirely to each state association, or possibly some program of financial aid from the national budget could be set up.

Every member of the Association should carefully consider all aspects of these proposed changes. A summary of the comments and suggestions received from state associations will be discussed in a later issue of this JOURNAL.

APPOINTMENT OF DIETITIANS, MEDICAL DEPARTMENT, ARMY OF THE UNITED STATES

Under date of April 22, the following information concerning Army dietitians, which supplements that on page 355 of this JOURNAL for May, was received from Major Helen C. Burns, Director of Dietitians:

Medical Department Dietitians on appointment are on an officer status without dependents and are entitled to the pay and allowances of a second lieutenant without dependents, which is $1800 per year plus 70 cents per day subsistence allowance. There is a 5 per cent increase of base pay for every 3 years of service. Deductions are made for subsistence and service. An appointee should provide herself with a sufficient quantity of hospital uniforms and civilian clothing for wear at her first station until uniforms are issued. Dietitians will be promoted to higher grade on the recommendations of their commanding officers. Promotions are based on the individual's qualifications, length of service, and available vacancies. Dietitians are entitled to cumulative leave of absence with pay at the rate of 30 days for each completed year of service. During wartime, this leave is granted according to the exigencies of the service. A 10 per cent increase in base pay is authorized for duty beyond the continental limits of the United States. A sufficient number of dietitians to fill all vacancies for foreign service usually volunteer; however, if the quota is not filled the required number will be detailed by order. Citizens of the United States, of the Philippine Islands, or of a co-belligerent or friendly country, who are otherwise qualified, are eligible for appointment. Naturalized citizens must furnish with applications a notarized or certified statement of citizenship. Applicants under 60 inches in height or 105 pounds in weight are not eligible for appointment. Medical Department Dietitians, Medical Department Physical Therapy Aides, and members of the Army Nurse Corps are women members of the Medical Department, on an officer status in the Army of the United States.

With the above-mentioned communication was the accompanying list of dietitians recently appointed to the Medical Department of the Army, totaling 125 assigned to stations within the United States and 18 to overseas duty:

NAME	COLLEGE	TRAINING COURSE*	STATION OF ASSIGNMENT
Andersland, Olga Borghild	Univ. of Minnesota	Univ. of Minnesota Hosp.	S. H. Chicago Sch. AAFTTC
Aronson, Jeannette Bulgiham	Brooklyn College, N. Y.		Schick Gen. Hosp., Clinton, Ia.
Austin, Frances Carolyn	Simmons College	Johns Hopkins Hosp.	S. H. Ft. Devens, Mass.
Barton, Jennie	Keuka College, N. Y.	West Penn. Hosp.	Overseas Duty
Behlen, Mary K.	Regis College, Mass.	Peter Bent Brigham Hosp.	W. R. G. H., Washington
Benson, Elinor J.	Univ. of Minnesota	Univ. Hosp., Cleveland	Stark Gen. Hosp., N. C.
Boehm, Betty	Kansas State College	Univ. Hosp., Okla. City	S. H. Cp. Patrick Henry, Va.
Bollenbach, Doris M.	N. J. College for Women	N. J. Coop. Course	Halloran Gen. Hosp., Staten Is., N. Y.
Boyd, Marjorie O.	Ohio State College	Presbyterian Hosp., N. Y.	Hammond Gen. Hosp., Modesto, Calif.
Brannon, Dorothy M.	Univ. of Alabama	New York Hosp., N. Y.	Nichols Gen. Hosp., Louisville
Burtch, Alva Frances	Iowa State College	Univ. of Minnesota Hosp.	Keesler Fld., Miss.
Childress, Clara Elizabeth	Furmans University, S. C.	Johns Hopkins Hosp.	W. R. G. H., Washington
Christiansen, Astrid K.	Univ. of Minnesota	Peter Bent Brigham Hosp.	Fitzsimons Gen. Hosp.
Cisne, Ida Maurine	Univ. of Illinois	Michael Reese Hosp., Chicago	S. H. Ft. Leonard Wood, Mo.
Clark, Grace Lillian	Iowa State College	State U. of Iowa Hosp.	Fitzsimons Gen. Hosp.
Cleghorn, Elizabeth	Oregon State College	Scripps Metabolic Clinic, La Jolla, Calif.	S. H. Cp. Callan, San Diego
Cochran, Carolyn Elizabeth	Ohio State University		S. H. Cp. Patrick Henry, Va.
Contente, Dorothy	Hunter College, N. Y. C.		S. H. Cp. Blanding, Fla.
Cotter, Jeanne Mary	Clark College, Iowa	St. Louis Univ., Mo.	S. H. Staging Area, New Orleans
Cummings, Doris	Framingham State Teachers College, Mass.	Univ. Hosp., Ann Arbor, Mich.	Overseas Duty
Cummings, Roberta A.	Hunter College, N. Y. C.		S. H. Ft. Meyer, Va.
Dahlgren, Fern V.	Univ. of Minnesota	St. Mary's Hosp., Minn.	Overseas Duty
Day, Evelyn Alice	Seton Hill College, Penn.		S. H. Ft. Belvoir, Va.
Devine, Elaine Patricia	College of St. Theresa, Minn.	St. Mary's Hosp., Minn.	O'Reilly Gen. Hosp., Mo.
Dickinson, Ruth	Framingham State Teachers College, Mass.	Boston Dispensary	S. H. Randolph Fld., Texas
Dytman, Alberta E.	Elmira College, N. Y.	Grasslands Hosp., N. Y.	S. H. Ft. Knox, Ky.
Ehlert, Helen A.	Iowa State College	Boston City Hosp.	S. H. Cp. Beale, Calif.
Ellsworth, Marjorie	Brigham Young Univ.	Latter-Day Saints Hosp., Salt Lake City	Hammond Gen. Hosp., Modesto, Calif.
Fall, Hilda M.	Univ. of Toronto		S. H. Pendleton Fld., Oreg.
Fleming, Elizabeth J.	Women's College, Del.	Hahnemann Hosp., Phila.	S. H. Cp. McCoy, Wisc.
Forsythe, Lois Maxine	Butler Univ., Indiana	Henry Ford Hosp., Detroit	S. H. AAFTTC, Kerans, Utah
Frey, Ruth Louise	Texas State College for Women		S. H. Sheppard Fld., Tex.
Gertsen, Alice M.	Simmons College	Peter Bent Brigham Hosp.	Lovell Gen. Hosp., Ft. Devens, Mass.

NAME	COLLEGE	TRAINING COURSE*	STATION OF ASSIGNMENT
Gilberg, Helen D.	Univ. of Wisconsin	Ancker Hosp., St. Paul	Fitzsimons Gen. Hospital
Gill, Mary Lois	Florida State College for Women	Univ. Hosp., Ann Arbor	Overseas Duty
Girard, Evelyn M.	Penn. State College		Deshon Gen. Hosp., Penn.
Goddard, Alice	Colorado State College	Harper Hosp., Detroit	Overseas Duty
Gordon, Flora H.	McGill Univ., Canada		Deshon Gen. Hosp., Butler
Greenbaum, Sylvia	Hunter College, N. Y. C.		Moore Gen. Hosp., N. C.
Harris, Hilda	Judson College, Ala.		S. H. Barksdale Fld., La.
Healey, Marjorie B.	Simmons College	Univ. Hosp., Cleveland	S. H. Ft. Devens, Mass.
Heilmann, Katherine	Texas State College for Women	Univ. Hosp., Ann Arbor	S. H. Boca Raton Fld., Fla.
Hexamer, Marjorey Jeanne	Purdue University	Christ Hosp., Ohio	Oliver Gen. Hosp., Ga.
Holthouse, Mary Margaret	Oregon State College	Presbyterian Hosp., N. Y.	S. H. Ft. G. G. Wright, Wash.
Huber, Rita H.	Rosary College, Ill.	St. Mary's Hosp., Minn.	S. H. Cp. Hoffman, N. C.
Jaynes, Winifred	Teachers College, N. Y. C.		S. H. Fort Story, Va.
Jepson, Isla L.	Univ. of Wisconsin	Univ. of Minnesota Hosp.	S. H. AAFTTC Traux Fld., Wisc.
Johnson, Kay L.	Iowa State College	Univ. of Cleveland Hosp.	S. H. Cp. Carson, Colo.
Jones, Edith A.	Univ. of Alabama	Johns Hopkins Hcsp.	Moore Gen. Hosp., S. C.
Jones, Lila M.	Syracuse University	Shadyside Hosp., Penn.	S. H. Steward Fld., West Point, N. Y.
Jordan, Gladys Elizabeth	Univ. of Nebraska	Massachusetts Gen. Hosp.	S. H. Ft. F. G. Warren, Wyo.
Katz, Hilda	Hunter College, N. Y. C.		Halloran Gen. Hosp , Staten Is.
Kendrick, Rowena A.	Colorado State College	Henry Ford Hosp., Detroit	Overseas Duty
Kenneck, Irene P.	Kansas State College	Montefiore Hosp., N. Y.	S. H. Cp. Carson, Colo.
Kesner, Helen Lucille	Univ. of Illinois	Grasslands Hosp., N. Y.	S. H. Ft. Belvoir, Va.
Ketcham, Betty Marie	Michigan State College	Cincinnati Gen. Hospital	S. H. Drew Field, Fla.
Klainer, Cecelia T.	Hunter College, N. Y. C.		W. R. G. H., Washington
Knickrehm, Marie Emma	Univ. of Nebraska	Oregon State	Overseas Duty
Lagerholm, Beatrice	Univ. of Connecticut	Peter Bent Brigham Hosp.	Overseas Duty
Linberg, Virginia E.	Iowa State College	Hahnemann Hosp., Phila.	Schick Gen. Hosp., Clinton, Iowa
Linn, Josephine	Catawba College, N. C.		S. H. Fort Jackson, S. C.
Lloyd, Althea E.	Florida State College for Women	Christ Hosp., Ohio	Nichols Gen. Hosp., Louisville
Lundin, Helen Frances	Univ. of N. Dakota	Univ. of Minnesota Hosp.	S. H. Lincoln AAB, Neb.
Martin, Ruby Stevens	William Smith College, N. Y.		S. H. Cp. Wallace, Tex.
Mathewson, Eleanor H.	Univ. of Nebraska	Jewish Hosp., Phila.	Overseas Duty
Mattison, Doris F.	Univ. of Nebraska	State Univ. of Iowa Hosp.	S. H. Davis-Monthan Fld., Ariz.
McKnight, Marjorie Ann	Madison College, Va.	Johns Hopkins Hosp.	W. R. G. H., Washington
Meyers, Mary J.	Iowa State College	Univ. of Minnesota Hosp.	Harmon Gen. Hosp., Tex.
Moore, Aimee N.	Woman's College, N. C.	Univ. Hosp., Ann Arbor	S. H. Cp. Pickett, Va.
Morlan, Una	Kansas State College	Stanford Univ. Hosp.	Overseas Duty
Mosemann, Martha E.	Univ. of Georgia	Med. College of Va.	S. H. Ft. Benning, Ga.
Moss, Gladys F.	Univ. of Missouri	Univ. Hosp., Ann Arbor	Fitzsimons Gen. Hosp.
Moxley, Elizabeth Carroll	Elmira College, N. Y.	Grasslands Hosp., N. Y.	ARMC, Washington, D. C.
Murphy, Hannah B.	Kansas State College	Indianapolis City Hosp.	S. H. Orlando AAB, Fla.
Nagle, Kathryn M.	Framingham State Teachers College, Mass.	Duke University Hosp.	Valley Forge Gen. Hosp.
Nausbaum, Mary F.	Univ. of Wisconsin	Cook County Hosp.	Overseas Duty
Nelson, Beulah Burnetta	Kansas State College	Oregon State	McCaw Gen. Hosp., Wash.
O'Donnell, Mabel	Univ. of Illinois	Shadyside Hosp., Penn.	Overseas Duty
Ostberg, Ena Dorothy	State Univ. of Montana	Beth Israel Hosp., Mass.	S. H. Ft. Wm. H. Harrison
Ownby, Florence	Simmons College	W. R. G. H., Washington	S. H. Ft. Devens, Mass.
Phillips, Margaret J.	Florida State College for Women	Univ. of Chicago Clinics	S. H. St. Petersburg, Fla.
Plotkin, Sylvia	Brooklyn University		S. H. Robins Fld. AAD, Ga.
Postle, Jeanne	Ohio State University	Cincinnati Gen. Hosp.	Stark Gen. Hosp., S. C.
Reams, Ruth A.	Battle Creek College		Overseas Duty
Rebeck, Pauline	Syracuse University		S. H. Cp. Van Dorn, Miss.
Reid, Eileen M.	Framingham State Teachers College, Mass.	Boston City Hosp.	Lovell Gen. Hosp., Ft. Devens, Mass.
Reiss, Betty Katherine	Drexel Institute of Tech.	Shadyside Hosp., Penn.	S. H. Sheppard Fld., Tex.
Ross, Bernice L.	Penn. State College		Overseas Duty

NAME	COLLEGE	TRAINING COURSE*	STATION OF ASSIGNMENT
Shay, Helen L.	Univ. of Cincinnati	Cincinnati Gen. Hosp.	S. H. Cp. Hale, Colo.
Shea, Ann Elizabeth	Mt. St. Vincent College, Nova Scotia		S. H. Cp. Wallace, Tex.
Skradski, Rose M.	Kansas State College	Peter Bent Brigham Hosp.	S. H. Maxwell Fld., Ala.
Smith, Evelyn A.	Kansas State College	Presbyterian Hosp., N. Y.	Hammond Gen. Hosp., Calif.
Soderholm, Mabel	Univ. of Nebraska	Univ. Hosp., Ann Arbor	Overseas Duty
Speck, Gertrude M.	College of St. Catherine	Univ. Hosp., Cleveland	S. H. Fort Knox, Ky.
Stephany, Edna A.	Cornell University		S. H. Indiantown Gap, Penn.
Stroup, Loreine V.	State College of Washington	Seattle Course	Baxter Gen. Hosp., Wash.
Stuart, Margaret	Iowa State College	Mt. Sinai Hosp., Ohio	S. H. Langley Fld., Va.
Stumpf, Grace Louise	Milwaukee-Downer College	Univ. Hosp., Ann Arbor	S. H. Ft. Leonard Wood, Mo.
Sullivan, Faith L.	Michigan State College		O'Reilly Gen. Hosp., Mo.
Summers, Ruth Mary I.	Iowa State College	St. Mark's Hosp., Utah	S. H. W. Los Angeles Area
Sussman, Sylvia	Hunter College, N. Y.		S. H. Darnall Gen. Hosp., Ky.
Szyman, Jean Genevieve	Univ. of Vermont		S. H. Ft. Belvoir, Va.
Tapke, Dorothy L.	Univ. of Cincinnati		Overseas Duty
Tauber, Roslyn Lucille	Hunter College, N. Y.		S. H. Cp. Rucker, Ala.
Temple, Winnie L.	Texas Tech. College	Grasslands Hosp., N. Y.	Overseas Duty
Tipton, Helen Barr	Kansas State College	Edward J. Meyer Mem. Hosp., N. Y.	S. H. AAFTTC, Kearns, Utah
Turner, Virginia Valeria	Madison College, Va.	Medical College of Va.	W. R. G. H., Washington
Wainwright, Alma Shaw	Rhode Island State College	Univ. Hosp., Ann Arbor	W. R. G. H., Washington
Wakefield, Ella L.	Florida State College for Women	Michael Reese Hosp., Chicago	S. H. Cp. Blanding, Fla.
Walish, Agnes L.	Mount Mary College, Wisc.	Indianapolis City Hosp.	S. H. Fort Ord, Calif.
Wallfred, Violet K.	Univ. of Minnesota	Ancker Hosp., St. Paul	S. H. Fort Belvoir, Va.
Walsh, Genevieve M.	Seton Hill College, Penn.	Jewish Hosp., Phila.	S. H. Richmond AAB
Ward, Nellie R.	Alabama Polytechnic Inst.	Vanderbilt Univ. Hosp.	S. H. Cp. Santa Ana, Calif.
Wassenaar, Joan Donna	Michigan State College	Santa Barbara Cottage Hosp.	S. H. Hamilton Fld., Calif.
Weber, Leonora Marie	State College of Washington	Univ. of Minnesota Hosp.	S. H. Fort Lawton, Wash.
Weller, Betty A.	State College of Washington	Beth Israel Hosp., Mass.	Stark Gen. Hosp., S. C.
Whitney, Adah E.	Framingham State Teachers College, Mass.	Univ. Hosp., Ann Arbor	S. H. Cp. Patrick Henry, Va.
Wick, Ardeth	Iowa State College	Lincoln Gen. Hosp.	S. H. Cp. Howze, Tex.
Wilbert, Amy Ardellar	Iowa State College	Lincoln Gen. Hosp.	Overseas Duty
Wiley, Ruth A.	Iowa State College	Lincoln Gen. Hosp.	S. H. Ft. F. E. Warren, Wyo.
Yancey, Mary Louise	Madison College, Va.	Philadelphia Gen. Hosp.	S. H. AAFTTC, St. Petersburg
Yoksa, Victoria Mary	Univ. of Alabama		S. H. Cp. Rucker, Ala.
Zamsky, Helen Sylvia	Carnegie Inst. of Technology		S. H. Fort Belvoir, Va.
Zaretzky, Bella L.	Hunter College, N. Y.		S. H. Cp. Polk, La.
Zilmer, Lucille Elizabeth	Univ. of Wisconsin	Johns Hopkins Hosp.	Torney Gen. Hosp., Calif.

* All those for whom the name of training course is not listed have had qualified hospital experience.

Current Comment

À LA CARTE VS. TABLE D'HÔTE MEALS IN WARTIME

A modified plan of pricing individual courses, when substituted for the old table d'hôte plan, and recently tested in a New York City apartment hotel, gave encouraging results, as reported by Beverly N. Jones, Food Supervisor, Harris, Kerr, Forster & Company, New York, and submitted by Margaret Fleming Simpkins, Assistant Food Supervisor, and member of the American Dietetic Association.

Under the old table d'hôte plan, meals served at a fixed price included: appetizer; soup; relishes; entrée, potatoes and vegetables; salad; dessert; and beverage. Under the new plan, each course is priced separately, affording the patron an opportunity to select any or all courses and pay accordingly. The courses selected by the 304 patrons whose checks were analyzed are shown in the following:

	UNDER OLD TABLE D'HÔTE PLAN	UNDER NEW MODIFIED À LA CARTE PLAN	PERCENTAGE DECREASE
Soup	304	138	54.61
Appetizer	304	164	46.01
Relishes	304	—	100.00
Entrée, Potato and Vegetable	304	304	—
Salad	304	33	89.15
Dessert	304	228	25.00
Beverage	304	146	51.97

Taking the minimum average number of pieces of china and silver ordinarily used by the hotel for each of the courses listed as a basis, it was discovered that 1189 pieces of china and 1172 pieces of silver which

ordinarily would have been used were not used under this plan, making the average saving per person 3.91 pieces of china and 3.86 pieces of silver, or a total of 7.77.

Over a period of one month, 1686 covers were served for dinner. On the basis of the figures obtained from the study of 304 covers, the minimum number of pieces of china and silver served on 1686 covers would be 6592 pieces of china and 6508 pieces of silver. This brings the total savings in the china and silver used in the serving of dinner for one month to the appreciable number of 13,100 pieces.

Mr. Jones observes that it takes very little imagination to realize just what this reduction means in the saving of handling, the reduction of china breakage and the wear and tear on silver. The consumption of cleaning supplies and soap powders is bound to be reduced. With increased business and fewer employees to handle the larger volume, this saving becomes an important factor not to be overlooked. In addition, this new menu pricing policy has increased profits by reducing the cost per dollar sale.

Six New York City hotels ranging in size from 250 to 1200 rooms, have had this new menu pricing policy in operation for one or more months, and with one exception have reduced their cost per dollar sale as much as 1.42 to 3.95 cents in one month. Furthermore, these hotels have been able to keep their menu sales prices well in line with the greatly increased cost of merchandise. They operate coffee shops, cafeterias, tea rooms, cocktail lounges, formal dining rooms, room service and supper rooms, with prices ranging from 75 cents for luncheon to $4.00 for dinner. The success of this new menu pricing policy, as demonstrated by its acceptance by both patron and management in high and low-priced restaurants, indicates that it may be applied to any type of restaurant operation, according to the report.

MAINTAINING STANDARDS IN WARTIME FEEDING[1]

OPAL BOWERS[2]

Today, in spite of the handicaps of priorities and rationing, increased volume of business and labor shortage, and with less buying power in every dollar, it is necessary for every food administrator to do a better job of maintaining high food standards as her contribution to the war effort.

We ask, "How can we increase our kitchen's efficiency?" I believe this cannot be answered unless we first analyze a few of our everyday problems. We must consider food, materials, equipment, and man-hours. All unnecessary expenditures and waste must be controlled.

First, let us check over our purchasing and receiving procedures and be sure the quality received equals the money spent.

Second, menus cannot be made on the run, and thought must be given to food production. Just now point values seem to be our stumbling block, but they may be a blessing in disguise. We are forced to use those fresh fruits and vegetables which have often been avoided because of the labor involved. But planning menus around fresh items can make our food more interesting and better nutritionally, if the foods are skilfully prepared. Time and temperatures seem to be the most important factors to watch in food production control, in order to see that vitamin content is not lowered.

Third, nothing should be wasted: Celery leaves, tips of fresh tomatoes and carrots, bones and fat scrap when thrown into the stock pot enrich the flavor of the soup. Outer leaves of lettuce can be used in chopped vegetable salads or served hot as wilted greens. For best results refrigerators must be kept near forty degrees. Contents of refrigerators can be checked routinely after each meal and leftovers used advantageously.

Fourth, it is important now, as always, to supervise service carefully and standardize portions. Cafeteria service is a distinct advantage from the standpoint of control, reduction of serving time, and number of employees needed. It should be remembered that neat, clean attendants and a neatly arranged counter with its hot, colorful food will stimulate the appetite, and that food well-cooked and properly seasoned will be eaten and enjoyed.

Fifth, we must analyze even more carefully than in peacetime the way in which we use employees' time. Poorly planned work areas, schedules, and work sequences may be responsible for much of the employees' inefficiency. Then, perhaps there will be time to do the odd cleaning jobs formerly performed by that erstwhile extra utility person.

A discussion of standards would certainly be incomplete if we failed to mention dishwashing procedures. In order to have clean and sterile dishes employees must be taught first to start with a thoroughly clean machine, to use controlled temperatures in both wash and rinse tanks, and to be sure the dishes are stacked without unnecessary handling.

On days when we are hard-pressed for help it is often a question whether it will be possible to leave the kitchen clean at night when it has been so difficult even to complete meal preparation on time. We have always managed, however, to get the dishes done and remove the day's accumulation of dirt, but only through persistent and careful guidance of supervisors and employees. It is up to all of us, then—especially in these times—to uphold the standards we have set for ourselves as food administrators or dietitians.

[1] Read before the Massachusetts Dietetic Association, Cambridge, April 6, 1943.

[2] Manager, Cowie Hall, Harvard Graduate School of Business Administration.

Nutrition and the War

DIETITIAN AIDES IN THE DIETARY DEPARTMENT

In view of the recently authorized American Red Cross Volunteer Dietitian's Aide Corps, it is of interest to report the views of dietitians concerning such volunteer workers, as presented at the April meeting of the Connecticut Dietetic Association.

Mrs. Josephine D'Andrea, Bridgeport Hospital, commented as follows:

The shortage of labor in institutional work has become one of the most acute problems, if not the most serious with which dietitians have had to cope. The American Red Cross has helped to solve this problem in part with canteen workers who volunteer their services in such emergencies. We have a particularly fine group of workers, averaging four a day, at the Bridgeport Hospital. At first, we were not quite sure what we could expect of them and what types of work they would be willing to do. We were afraid that some of the women who had servants in their own homes might not care to prepare vegetables or stand over a hot steam-table serving food, but we have found (without exception) that they are ready and willing to do anything we ask of them and they do it well after a little practice.

These workers usually come to us as a group through a church, club or other organization. They have had the Red Cross nutrition and canteen courses and are prepared for the practical application of this training. Most of them are unfamiliar with hospital kitchens and large quantity preparation, and require adequate supervision and instruction. The preparation of 4 salads in the home in contrast to 150 in the hospital, for instance, requires some readjustment in speed and technique. At first, they are apt to prepare one head of lettuce at a time and then make the salads from it, repeating the same procedure with the next head; they may chop vegetables by cutting against their thumbs, lift each slice of bread as they butter it, and other practices which are hangovers from small quantity food preparation in the home. Criticism, which is given in the form of suggestion, is very well received and utilized.

Our procedure has been to have a short conference with each new group that volunteers, during which we tell them how much we appreciate the time and services which they are giving. We try to make them feel they are needed, and in making this clear we go into the background of the Dietary Department of the hospital. We tell them of our standards which have been developed and improved year after year, and that now, faced with the shortage of labor, these standards are threatened. We explain that no matter how few people we have working for us, we can always turn out a meal of sorts to feed the patients and employees, but not always in the way we would like to have that meal served. And so, by volunteering their services, they are helping us to keep up the standards we have set for ourselves. Everyone these days must serve simpler menus, with many of the extra garnishes eliminated entirely, yet at times even the simple menus suggested by the National Nutrition Program are difficult to execute.

I will list briefly the types of work which canteen workers do at our hospital:

(1) Preparation of salads for the wards—numbering usually 150 daily.
(2) Assisting in the pastry kitchen with pies, puddings and other desserts.
(3) Assisting in the preparation of the private patients' salads, 120 twice daily.
(4) Preparing all types of cold foods, salads and garnishes for the nurses' cafeteria.
(5) Serving on the steam-table in the nurses' cafeteria.
(6) Preparation of the refreshments, which usually include three varieties of sandwich spreads, cookies and coffee, for the Blood Banks. We have on the average three Blood Banks per week and around 30 to 40 donors to be fed each time.

At first we placed our canteen workers in the diet kitchen, making gelatin desserts, custards, puddings, cream soups, and various other special-diet foods, but we found their services more valuable elsewhere.

Some of our canteen workers have been exceptionally alert to our need. One, a home economics instructor, has interested her junior high school girls sufficiently to have them volunteer also. Another volunteer stepped quite ably into a vacancy which occurred in our pastry kitchen and remained at a salary until she moved from the city.

The time of day when volunteers are most helpful will vary with the hospital. For example, we find 10 a.m. to 3 p.m. with an hour off for lunch most satisfactory to us. They have been particularly faithful in coming regularly and no one has dropped out entirely. I think that not enough can be said in praise of the fine, hard-working spirit they have shown, and that we should not confine our praises to our own group. We certainly feel they have contributed a great deal to the smooth functioning of our Dietary Department.

Mrs. Alice Manek Stewart, Norwalk (Connecticut) General Hospital, stated:

The volunteers of the Norwalk General Hospital were organized in October 1940. The 165 active members volunteer one or two day's service each week to the hospital. On duty they wear a light blue smock. They work in shifts from 9 a.m. to 1:30 p.m.; 1:30 p.m. to 4 p.m.; and 6 p.m. to 10 p.m.

We have used five members of the group in the Dietary Department for the past six months. They assist on one of the private floors from 9 a.m. to 1:30 p.m. Their duties are distributing and collecting the menus, totaling and recording the orders on the kitchen order sheets. At noon, they help the dietitian serve the meal. In their spare time, they assist in the main diet kitchen in the preparation of salads, fruit cups, etc. In emergencies we have used them behind the counter in the dining room and they have washed dishes in the diet kitchens. We have found them unusually reliable and willing.

Mrs. Leah Kane O'Neill, New Britain (Connecticut) General Hospital, reported as follows:

In March 1942 I was invited to attend a luncheon at the State Trade School, the purpose of which was to discuss the organization of a canteen unit. I was asked if I would be willing to accept sixteen of these canteen aides and offer them their practical experience at the hospital. At first, I was uncertain of my chefs who are not too anxious even to let me, let alone a stranger, touch a pan. And when would I find the time to direct these women? Naturally I wanted to do my bit in this program, however, so I finally said "yes." The next day, with considerable qualms, I announced in the kitchen that we were going to have a group of women volunteers for observing kitchen procedure. The chefs were amazed. "We are much too busy to have strangers in the kitchen when we are working and trying to get out meals," they complained. Finally they condescended to allow the women to come in, if they would stay out of their way. At this first session I avoided telling the chefs that hereafter the volunteers would be coming in for two hours of practice work daily. I thought this had better be kept quiet for the moment.

The first week went fairly well. I put away the cleavers and the large knives and no one was seriously injured. The second week I suggested to the chefs that they let the women help a little bit. This was received with a certain amount of disapproval but not so much as I had expected. Somehow or other the volunteers had begun to be accepted and thereafter I had no trouble with the chefs. Later on, much to my surprise, the chefs would ask if the volunteers were to be expected and how many would be on hand to help them!

We ran into one difficulty, however. The chefs forgot that onions are onions and gave several of the women a pan of onions to prepare. But our volunteers invariably have been "good sports" about helping in the kitchen, the cafeteria, or wherever they are needed in the Dietary Department. They help with the preparation of vegetables and of meat dishes and pastry. They have helped wash dishes in the diet kitchen, distributed trays to private patients, and served in the cafeteria. Whatever I ask them to do they smile and say, "Surely, that's what I'm here for." We also have some nutrition aides who have been coming in and helping with the office work of the department.

In January 1943 we had a total of 19 volunteers giving 88 hours' service; in February, 32 with a total of 205 hours' service; and in March, 42 with a total of 298.5 hours' service. They have organized themselves so that from one to three members give from two to four hours' service every day with the exception of Saturday and Sunday. In my opinion great credit is due these women who have willingly and cheerfully done work that they had never done before.

THE DIETITIAN IN INDUSTRY

An article bearing the title "Feeding Workers for Health and Efficiency" appeared in the February issue of *Industry*, (published by the Associated Industries of Massachusetts) and written by Quindara Oliver Dodge, associate professor of Institutional Management, Simmons College, and director, Vocational Training Department, Women's Educational and Industrial Union, Boston. Addressed to executives in industry, the paper contains information which should be of immediate help to this group in establishing or improving food service to industrial workers. The stated purpose of the article is "to arouse interest in nutrition as an aid to improved health."

After pointing out that the success of a nutritional program in an industrial plant is dependent, in the final analysis, upon the employment of a qualified dietitian to whom adequate administrative responsibility has been delegated, Mrs. Dodge continues:

> A cafeteria that is plant-owned and operated lends itself more readily to the initiation of a sound nutritional health program than does a cafeteria that is concessionaire-operated. The plant management, if only from the purely selfish standpoint that health pays dividends, operates the cafeteria with the good of the worker primarily in mind so that except in unusual situations the financial policy is one of just meeting expenses. The concessionaire operates a plant cafeteria as a business and rightly expects to make a profit. Even though this is true with respect to plant versus concessionaire-operated cafeterias, there are situations where exigencies of management make the concessionaire-operated cafeteria appear to be the only intelligent answer, but in such situations management frankly looks upon the cafeteria as a service to its employees and is in the position of washing its hands of any responsibility for the nutritional health of the worker.
>
> Institutional management, the application of the principles of scientific management to large group feeding, is the tool by which the sciences of foods and nutrition are applied. . . . The cafeteria manager must have adequate training, experience, and maturity and be directly responsible to someone in authority sufficiently near the top so that his opinion on recommendations will carry real weight when backing up the cafeteria manager's administration. A graduate dietitian with the proper training is unusually well fitted to assume this type of responsibility.
>
> The cafeteria is the most important single means available for readily improving the nutritional health of the worker. The menu should offer a limited but adequate variety of complete-meal combinations planned to provide at least a third of the day's essential nutrients for an adequate diet and should permit a reasonable choice by the worker. These nutritionally adequate and popular meal combinations should be priced to meet the sum the worker has to spend for food. The average check in a number of cafeterias visited would indicate that the complete meal should be priced from 25 to 40 cents. Milk could also be sold in half-pint cartons at cost or slightly below in order to compete on a price basis with other beverages of less nutritional value. Complete meals at these low prices represent unusual values and changes in choice of vegetables or other items on the combination should not be permitted, both because exercise of choice slows up the line and a substitution of one item for another may adversely affect the food value as well as the food cost percentage. The location or sequence of nutritionally adequate combinations on the menu board with terminology calculated to invite selection can all be used effectively to influence the worker's choice in favor of the lunch high in nutritive value.
>
> One of the least expensive and simplest means of starting a nutrition education program in plants without cafeterias or feeding facilities is the arrangement for between-meal supplemental feedings of fruit juices which have been shown to be beneficial. This demands very little effort and expense and requires little valuable floor space for storage of supplies or preparation. Regular meals high in nutritive value and satisfying to the worker, such as the famed Oslo meal, could be put up outside the plant and sent in at regular stated times for service or even prepared in the plant without any cooking facilities.
>
> The importance of the dietitian in the Army, in hospitals, and in large school cafeteria systems is well recognized but her value is yet to be proved in industry. In the past, when the profession was young, there have been failures in attempts to use dietitians in industry. These failures have influenced the opinions of management and industrial physicians long after the conditions that caused them were overcome. . . . In recent years colleges have given careful attention to adequate training for large-group feeding administrative responsibility, and management is becoming increasingly aware of the importance of delegating this responsibility to the dietitian employed as a cafeteria manager. The dietitian can only do the job that needs doing if she is given complete authority and if she is the right person for the job with the requisite personality and administrative capacity. In the hospital a diet-therapy or research dietitian would never be expected to make good as the administrative head of the large and complex nutrition department; no more should this type of dietitian or a nutritionist be given similar authority in an industrial cafeteria.
>
> Great confusion regarding the two terms, dietitian and nutritionist, is evident in articles on nutrition in industry. Fundamentally a nutritionist motivates better nutritional habits for individuals or groups in a community by teaching their importance. A dietitian secures improved nutritional health for those under her care in a given institution or industry by the food she feeds them. Therefore we think of the nutritionist as teaching or advising in the community

or being called in to advise in the plant, and the dietitian doing the job of feeding and promoting a sound nutrition education program within the plant.

Materials to use in an education program for workers and their wives and sources of other information are listed in the article.

NUTRITION IN INDUSTRY

At the Twentieth Annual Conference of the Milbank Memorial Fund, New York Academy of Medicine, May 7, 1942, the proceedings of which have recently been published, an informative discussion of the problem of nutrition in industry was conducted, with nutrition authorities and industrial physicians contributing opinions, ideas, and suggestions regarding the best procedures for improving the nutrition of industrial workers. Present dietary practices and the existing facilities for feeding the workers as well as more technical considerations concerning their nutrition were considered. These were followed by a paper by Dr. John H. Foulger, Director, Haskell Laboratory of Industrial Toxicology, on "The Role of Nutrition in Combating Toxicities in Industry." Since very little has been published on this subject, excerpts from the summary of his paper are quoted below:

Contrary to statements in most writings on industrial toxicology, the major economic loss in industry from exposure of workers to chemicals is not from the relatively few cases of frank clinical poisonings but from a very large number of ill-defined conditions not generally recognized as having any relation to toxic exposure. They are frequently diagnosed by the family physician as neurocirculatory asthenia. The first effects of exposure to a chemical are: unusual degree of fatigue, headache, and a series of gastro-intestinal symptoms; palpitation, and pain in the precordium and extremities. If allowed to continue, the purely functional abnormality may develop into a definite organic injury. This train of events is not specific for chemicals, but can be produced by disease, improper nutrition, and anoxia.

Since nutritional status was a very important factor in the production of these functional changes, Dr. Foulger instituted studies to ascertain the specific nutritional conditions underlying the abnormalities and the steps necessary for their improvement. Among workers exposed to toxic chemicals he noted the prevalence of neurocirculatory instability. Then he found that, although the possible hazard from the toxic material increased thirtyfold as production requirements were raised, administration of vitamin C (100 mg. a day) decreased the proportion of men with neurocirculatory instability. Dr. Foulger cited the recorded literature on the relation of diet to prevention of trinitrotoluene poisoning. In studies to detect the earliest effects of exposure to this chemical, a relationship to nutrition was demonstrated and it was concluded that nutritional state is a factor in protecting against the toxic effects of such a chemical as trinitrotoluene, that vitamins (B_1 and C) participate in the detoxification of trinitrotoluene and that animals exposed to toxic chemicals may benefit by a daily vitamin intake higher than that usually needed by animals not so exposed.

Many chemicals used as antioxidants, particularly in the rubber industry, cause not only a contact dermatitis but also an allergic reaction. High amounts of vitamin C given to guinea-pigs exposed to thiol compounds prevented dermatitis, although the animals became sensitized to the toxic chemical. In studying the excretion of betanaphthylamine in men exposed to the manufacture of dye intermediates, Dr. Foulger found a very definite seasonal trend in the ability of the body to convert the substance into other compounds, with the peak appearing during the summer months. Whether betanaphthylamine was converted seemed to depend on the presence or absence of free perspiration on the skin which is determined by temperature. Since significant quantities of vitamins B_1 and C are said to be lost through perspiration, Dr. Foulger suggested that nutritional state may well be involved in the process.

Dr. Foulger asserted that the war would be over before education could remedy the nutritional condition of workers in plants and that it is difficult to be certain that each worker in an exposed occupation is receiving an adequate diet. As a practical measure to ensure that men are receiving necessary protection through adequate amounts of certain essential nutrients, he has adopted the practice of administering tablets of vitamin C and the vitamin B complex.

In the discussion which followed, Dr. Charles G. King, Nutrition Foundation, Inc., remarked that experiments with laboratory animals exposed to toxic substances "support the thesis that the vitamins are of crucial importance in many basic functions in the body . . . and if the tissue is exposed to injury and put under conditions of strain, either to resist a toxic agent or to repair its cellular processes, then it would be expected that abundant normal supplies of vitamins would have a very significant effect."

Dr. C. D. Selby, Medical Consultant, General Motors Corporation, said that he believed the reason why industry has not embarked on a nutritional program is because it has been advised to give indiscriminately large quantities of multiple vitamins which it has hesitated to do. He suggested several "preventive measures" to combat the problem of ill-chosen diets on the part of workers, such as: an adequate "midshift meal," preferably prepared under the direction of a competent dietitian; counsel on nutritional matters by a nutritionist who will invite confidence and be able to give practical advice; general instruction on diet and nutrition, particularly through the physician or nutritionist upon the occasion of each visit of the employee to the medical department; and special instructions to the homemakers who prepare meals for the workers.

Dr. Russell M. Wilder, Mayo Clinic, drew this distinction between a cafeteria and a canteen. "The cafeteria permits the individual to make bad food selection; the canteen can be controlled so that only preferred foods are provided. It is a popular misconception that a variety of diet ensures nutritional adequacy. That is certainly not true if the individual selects from that variety the less preferred foods. For example, given a wide variety of choice he may select pie and cake and cookies and plain white bread, and reject meat, vegetables, milk, and fruit. If it were possible, I think it would be splendid to make the dietary environment of the workers satisfactory by means of canteens which would only provide those foods that are nutritionally preferred.

BUY WAR BONDS AND STAMPS

Here's what one leatherneck dreams about!

One Marine's dream of the post-war world is a mountain of strawberry ice cream. He wrote his girl from Guadalcanal that he wants it three times a day, every day for five years. In standard servings, that's over 900 quarts!

Strawberry ice cream was a symbol, of course, to a hot, tired fighting man in a foxhole—a symbol of his home town—a symbol of America. It must have appealed to lots of folks, for many newspapers carried the story.

There are good reasons why ice cream is on Army menus regularly — good reasons why busy war workers eat so much of it. It's more than a delicious dessert—*it's a valuable food*—rich in vitamins and calcium.

Right now, of course, ice cream must come from the same milk supply that furnishes milk, butter and cheese to soldiers, civilians and allies alike. That means less ice cream for your family's use. If you'll be content with your fair share—and accept part of your order in fruit ices—*you* can continue to enjoy ice cream.

And *we'll* continue to improve ice cream processing and packaging — controlling its quality — keeping it pure and good.

We'll continue our intensive laboratory research . . . developing important new products from milk . . . bringing to America's fighters, workers and friendly allies the full benefits of nature's most nearly perfect food.

Dedicated to the wider use and better understanding of dairy products as human food . . . as a base for the development of new products and materials . . . as a source of health and enduring progress on the farms and in the towns and cities of America.

NATIONAL DAIRY
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Originators of the Sealtest System of Laboratory Protection

The same thing might be accomplished, it is true, by establishing price differentials."

In a munitions plant in Canada, according to Dr. F. F. Tisdall, Wing Commander, RCAF, it was pointed out to the boy who pushed the food cart that if he sold soft drinks in bottles he had to go around again and pick up the bottles, whereas the cardboard containers in which milk was sold could be thrown away. After that, the sale of milk went up considerably. Another suggestion was that the dairies or the plants should supply refrigerating apparatus on the carts similar to that supplied by the soft drink companies, as workers naturally prefer the cooler drinks in summer. It was reported that a great many Canadian plants are returning to a fixed ten-minute rest period instead of the "cart" system, one reason being the avoidance of refuse and litter over the plants.

In response to a question as to whether there is any public health control over the deplorably low-grade eating places around plants, Dr. Thomas Parran, Surgeon General, U. S. Public Health Service, replied that the control rests with the state or local health authorities, usually the latter, and in some of the boom areas the protective service is still rather primitive.

A letter recently sent by WPB to industrial plants holding government contracts, called attention to the importance of industrial hygiene and accident prevention and the need for a full-time trained medical personnel, the whole emphasis of the letter being on increased production, physical fitness and the minimizing of accidents, industrial disease and other disability. Dr. Parran suggested the possibility of "getting similar representation to industry in reference to nutrition, providing some definite information as to the importance of nutrition among industrial workers can be accumulated." He expressed the opinion that the average industrialist isn't convinced that an adequate diet means anything in terms of production, and ventured the hope that "results from scientific studies would be able to present definite before-and-after evidence as to the influence of nutrition on production, such as less time lost from work, greater unit production, and smaller proportion of spoilage of materials."

To this, Dr. F. G. Boudreau, Executive Director, Milbank Memorial Fund, replied, "One of the first acts of the Committee on Nutrition in Industry was to recommend that a controlled study of this question be conducted so as to obtain scientific data. You have heard today the preliminary report from that study. We must have the evidence; it must be scientific and irrefutable. When the points revealed by Dr. Kruse are considered, the long-standing nutritional deficiencies, the long time required to reverse the changes, it is evident that studies of nutrition in industry must be long-term studies. I think all short-time controlled experiments with food are open to the charge that they are based rather on psychological than on physiological grounds."

Needless to say, readers of this JOURNAL, as well as all others concerned with the important problem of nutrition in industry, will look forward to reports of these investigations when they are made.

Industrial Ventilation

To ventilate a room is to air it. But nowadays ventilation connotes something more than the introduction of some fresh air, however little, into a building. Satisfactory ventilation provides a healthy, refreshing, and comfortable atmosphere; and to ensure comfort due regard must be paid to the warmth of the environment. Ventilation is thus indissolubly linked with the warming or cooling of a building. When a ventilating system gives control of the cleanliness, humidity and warmth of the atmosphere it is known as an air-conditioning system. Many factors must be taken into consideration if ideal conditions are to be provided. . . .

The primary object of the ventilation of a confined space is to provide a respirable atmosphere; an adequate supply of oxygen must be maintained, and the products of respiration must be removed at a sufficient rate. Unless there is other control of the temperature, the interchange of air is responsible for the removal of much of the heat dissipated by the bodies of the occupants or by machinery and other appliances. Ventilation is necessary to remove body odors, and the organisms discharged by sneezing and coughing; and where toxic dusts, gases or vapors are set free in the general atmosphere the ventilation must also be sufficient to ensure that the concentrations of these substances are kept below the danger thresholds. . . . People vary in their response to body odors. Some do not seem to object to them, while to others they are most objectionable and even nauseating. . . . Winslow and Palmer concluded that there were substances present in the air of an unventilated occupied room which in some way, and without producing conscious discomfort or detectable physiological symptoms, diminished the appetite for food. . . . Such odors, even when not consciously perceived, had a clearly demonstrable effect in reducing the appetite for food. . . .

It will of course be realized that where toxic substances have to be dealt with by general ventilation the fresh air requirements will be governed by the quantities of air necessary to dilute these substances, rather than by those needed for odor control.

[This is an excellent review, much of which is applicable in organizations other than industrial. Ed.]—*Industrial Ventilation in War: A Review. T. Bedford, Bulletin of Hygiene, 18: 91, 1943.*

Good News to the dietetic world at a time of widespread shortages is the fact that a *readily available* breakfast cereal, the new KELLOGG'S PEP, contains more of the vitamins least likely to be abundant in ordinary diets—B_1 and D—than any other nationally advertised whole-wheat flake cereal.

KELLOGG'S PEP was the first breakfast cereal to be fortified with added amounts of vitamins, and now contains *more* than any other whole-wheat flake cereal nationally advertised. A regular one-ounce portion of PEP now provides:

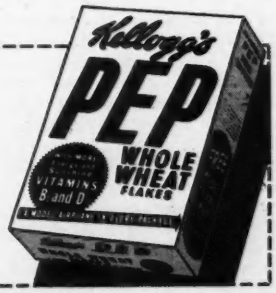
THIAMIN (B_1) 84 USP Units—¼ the daily minimum requirement for adults.

CALCIFEROL (D) 400 USP Units—the full daily minimum requirement for children and adults.

Why not try some of the new PEP yourself?

Every Kellogg cereal is made from whole grain, or is restored to whole grain nutritive values of thiamin (vitamin B_1), niacin and iron.

WHOLE GRAIN VALUE (Thiamin, Niacin, Iron Added)	WHOLE GRAIN VALUE (Thiamin Added)	WHOLE GRAIN
Kellogg's Corn Flakes	Kellogg's All-Bran	Kellogg's Shredded Wheat
Kellogg's Rice Krispies	Kellogg's 40% Bran Flakes	Kellogg's Krumbles
		Kellogg's Pep



Book Reviews

Balinese Character. A Photographic Analysis. By Gregory Bateson and Margaret Mead. Volume II, Special Publications of the New York Academy of Sciences, 1942. Cloth. 100 plates. Pp. 277. Price $3.75.

According to the introductory comment, the authors "are attempting a new method of stating the intangible relationships among different types of culturally standardized behavior by placing side by side mutually relevant photographs." The volume, beautifully executed even to an inexpert eye, "is an attempt to present those aspects of our results and those methods of research which we have judged most likely to be of immediate use to other students," and as such the book is an important contribution to the literature. The Introduction continues, "We are faced with the problem of building a new world; we have to reorient the old values of many contrasting and contradictory cultural systems into a new form which will use but transcend them all. This can only be done through a disciplined science of human relations and such a science is built by drawing out from very detailed, concrete materials, such as these, the relevant abstractions—the vocabulary which will help us to plan an integrated world."

Food habits are, of course, an essential part of any culture and will be considered in any plan for a new world. The Balinese attitudes toward food and the resulting methods of food preparation and eating customs have been carefully studied and recorded by means of description as well as photographs.

Food For People. By Margaret G. Reid, Professor of Economics, Iowa State College. New York: John Wiley & Sons, Inc., 1943. Cloth. Pp. 653. Price $4.

The publication of this book is well timed. It is the book of the hour for dietitians, nutritionists and economists concerned with the present and postwar problems of feeding people. Very properly, it is written from the viewpoint of the economist, with the aid of authorities in the sciences of chemistry, bacteriology and nutrition and others in the field of the social sciences. It stems, too, from the heart of the fertile Middle West—those rich lands on which so much of our food supply depends.

The book provides a panoramic picture of the present food situation in this country, based on the widest possible range of source materials, together with reflections on the probable path of the future. Besides the chapters on food production, processing and preparation, there are excellent chapters on food preferences and habits, food prices, nutrition education, advertising, food control in wartime, etc.—in all, 32 chapters with appropriate subdivisions. For those who have not been in close touch with developments in the food field and who wish to get a quick over-all view of the status of food production, consumption, and social policy regarding these, the book will save hours of library research.

Some of the author's aims as stated in the Preface are as follows: "It is hoped that the discussion will serve to quicken the interest in placing welfare with reference to food more clearly before those whose decisions direct our economy, both those in private enterprise and those responsible for government policy. The book should be of value to all interested in economics and social policy as they impinge on consumers. To those working in the field of consumption, it should provide a comprehensive introduction to food. Food producers, both agriculturalists and manufacturers, should find much to interest them in the discussion of market practices, market trends, food preferences, and ways of increasing adequacy. And, finally, it is felt that much of the discussion should be useful to nutritionists who feel the need of visualizing more precisely the status of food habits and factors influencing them and the various programs designed to bring about improvement in dietary habits."

Food For People contains a tremendous amount of information, much of it statistical, but when the author digresses to discuss the problems which she has presented and to suggest possible solutions, she demonstrates a writing facility which lifts her lines from the dull and the ponderous, so frequently associated with like dissertations, and, what is more, she writes with the assurance which comes only with thorough knowledge of a subject.

Indigestion. Its Diagnosis and Management With Special Reference to Diet. By Martin E. Rehfuss, M.D. Philadelphia: W. B. Saunders Company, 1943. Cloth. Illustrated. Pp. 556. Price $7.

In the words of Dr. Rehfuss, this book is written for the general practitioner, he who "is the clearing station for all the ills of the flesh, not the least of which is indigestion." This excellent book should serve to clarify our understanding of that anomalous term, indigestion, which to the layman represents "a vast category of conditions, both inside and outside the digestive tract, that *makes him conscious of his digestion.*" (Italics ours.) It should also teach a greater respect for the stomach as "a delicate index of bodily function."

While the whole book will be helpful to the dietitian, she will be particularly interested in the 169 pages devoted specifically to indigestion and diet, and other aspects of diet in relation to specific conditions.

Food Chemistry and Cookery. By Evelyn G. Halliday, University of Chicago, and Isabel T. Noble, University of Minnesota. Chicago: The University of Chicago Press, 1943. Cloth. Illustrated. Pp. 346. Price $3.

This new book, based on the procedures used at the University of Chicago, is intended primarily as a text for college courses in food chemistry and experimental cooking. As stated by the authors in the Foreword, "The main purpose is to give an understanding of the chemical principles upon which good practices in food preparation and preservation are based; to provide the information required for the identification and satisfactory utilization of closely related food materials, such as certain culinary fats, flours, and baking powders; and to give a chemical background for courses in nutrition and dietetics."

As could be expected, this is a carefully prepared, thoroughly sound textbook. The quality of the content is matched by the unusually fine physical makeup and editorial "styling." The introductory chapter, which is apparently addressed to the instructor, describes the necessary laboratory facilities and lists apparatus assumed to be in the students' desks. In this chapter also is a classification of experiments, showing those requiring a chemistry

How Calgonite's *Twin Action** combats hidden danger

**Twin Action* *Calgonite is the only mechanical dishwashing compound which combines 100% water softening with thorough alkaline cleansing...without creating a precipitate . . . because Calgonite contains Calgon* —the one material that makes water 100% soft—the one material that provides a clear washing solution which will not form film on dishes or scum and scale in the machine.*

GERMS *like* the protective film that they find on most china and glassware. This insoluble coating, caused by the reaction of fatty matter and ordinary alkaline detergents, may carry them safely through the dishwashing machine, protecting them from attack or removal.

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laboratory, those requiring a food laboratory, and those that can be performed in either one. Suggested forms for recording quantitative data are included. Each succeeding chapter, covering the various foods or food groups, presents theoretical considerations and discussions of the purpose and significance of each experiment or group of experiments, also summaries of the methods to be employed if they are long and complicated. A list of the special apparatus needed and a list of food materials, chemicals, and solutions required to do the experiments once, are included. Directions for making the chemical solutions are provided. The chapter on the chemistry of vegetable cookery is worthy of special mention, not only because of the several procedures given, but because of the discussion of the problem of obtaining accurate determinations regarding the vitamin and mineral losses in cooking vegetables. Following this the authors wisely suggest to the students that in this particular case the most they can hope to gain from the type of laboratory work which they can do as a class "is a general idea of the procedure as a whole and the difficulties involved in carrying it out in such a way as to obtain reliable results."

Food Chemistry and Cookery will undoubtedly be widely adopted for college classes and should have considerable use as a reference book on up-to-date procedures in this field.

Creatine and Creatinine Metabolism. By Howard H. Beard, Ph.D., Professor and Director, Department of Biochemistry, Louisiana State University. Brooklyn, New York: Chemical Publishing Co. Inc., 1943. Cloth. Pp. 376. Price $4.

Dr. Beard, whose published works in the field of creatine and creatinine metabolism are extensive, herein describes the results obtained by himself and other investigators during the last fifteen years. The applications of these findings to human metabolism and to diseases of the muscles and heart are indicated. Detailed instructions for determining creatine and creatinine in body tissues and fluids are included which may be followed by technicians not especially trained in analytical chemistry. An extensive bibliography, a list of monographs and reviews, and a complete author and subject index are included.

Experimental Cookery. By Belle Lowe, Iowa State College. New York: John Wiley & Sons, Inc., 1943. Third edition. Cloth. Illustrated. Pp. 611. Price $4.50.

The revision of this text represents a reorganization and rewriting of all the material in the previous edition. The text matter and references have been brought up to date. The function of the book, according to the author, is to present the chemical and physical basis, particularly of colloid chemistry and of food preparation, in a form suitable for use as a textbook in colleges and as a reference book on cookery, as well as to acquaint the student with the accomplishments of those who have worked in this field.

In the revision, the first chapter presents a brief review of the principles of colloid chemistry and discusses the relationship of cookery to colloid chemistry. Then follow chapters on sugar cookery; freezing and ice cream; food preservation; fruits and vegetables; jelly; gelatin; meat; emulsions; milk and cheese; eggs; starch, flour and bread; batters and doughs; and fats and oils. Each chapter is in reality a survey or summary of the facts and findings as presented in the literature with many added citations. While the discussion covers the chemical changes effected by various methods of preparing and processing foods, the experiments listed at the end of each chapter are to be performed in the kitchen rather than in the laboratory. In fact, throughout the text the interpretation of chemical processes in terms of practical or tangible effects such as texture, color and flavor of foods, etc., follows closely the technical and theoretical discussion.

Experimental Cookery will undoubtedly continue to be a valuable textbook for courses which follow the author's general plan of organization and emphasis, and it should also have some use as a reference.

Dictionary of Bio-Chemistry and Related Subjects. Compiled by William Marias Malisoff, Professor of Bio-Chemistry, Polytechnic Institute of Brooklyn. New York: Philosophical Library, Inc., 1943. Cloth. Pp. 579. Price $7.50.

A dictionary such as this should meet a real need among students and practitioners. As a pioneering effort in an entirely new field, the author welcomes suggestions, be they from experts or students, since as with any other special-purpose dictionary only practical use will bring to light criteria for improvement in future editions.

In the difficult task of compiling this first edition the writer has been assisted by forty-six collaborators, the majority of whom are on the teaching staffs of leading universities, hospitals, and medical and industrial research laboratories. Especially helpful are the many summarized discussions, in reality short monographs, on specific subjects. For instance, Donald D. Van Slyke discusses the amino acids; the author, the term biochemistry in its many ramifications; H. C. Bradley of the University of Wisconsin, autolysis; while Professor E. J. Witzemann of the same university has contributed a beautiful discussion of carbohydrate and fat catabolism and their reciprocal integration. Incidentally, the scholarly approach of the author, Professor Malisoff, is indicated in his brief comment on the term "catabolism." Current usage favors this as opposed to "katabolism," despite the Greek origin of the word, all of which may or may not have come about as a result of the present tendency to shove the dead languages into the limbo of the obsolete.

In view of the general excellence of this book, attention should be called to at least one or two probably accidental inconsistencies, in the interest of future editions. Biochemistry is hyphenated in the title and running head and nowhere else in the book. A more or less cursory investigation brings to light one misleading or inaccurate statement. Under poliomyelitis it is said that "The chief mainstay in its treatment is convalescents' serum."

Flying Men and Medicine. The Effects of Flying Upon the Human Body. By E. Osmun Barr, M.D. New York: Funk & Wagnalls Company, 1943. Cloth. Pp. 254. Price $2.50.

This book discusses the nervous system and contributing parts and the other systems of the body as these relate to the physical and mental equipment essential to flyers. The only sections of direct interest to the dietitian are those concerned with maintaining the fluid content of the digestive tract which according to the author enables the flyer to absorb the shock of rapid and severe accelerations; care of the eyes as this can be accomplished through diet; and a rather lengthy chapter on the digestive system with specific applications to the conditions met in flying.

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Current Literature

Contributed by Helen Baughman, Janet Engebretsen and Hilda McEwen, Dietary Department, Johns Hopkins Hospital, Baltimore; Quindara Oliver Dodge, School of Home Economics, Simmons College, and Women's Educational and Industrial Union, Boston; and the JOURNAL staff.

AMERICAN JOURNAL OF DIGESTIVE DISEASES

Vol. 10, March 1943

*Multivitamin prophylaxis and therapy in respiratory diseases of the aged. L. L. Kay.—p. 96.
*Some clinical studies on the psycho-somatic background of peptic ulcer. A. Winkelstein and L. Rothschild.—p. 99.
*The nervous stomach. O. S. Jones.—p. 102.
*Gastric acidity in pulmonary tuberculosis. A. L. Kruger.—p. 111.

Multivitamin Prophylaxis and Therapy. Vitamin deficiency in the aged is more frequent than is generally supposed and is among the factors which increase the susceptibility of the aged to respiratory infections. Adequate amounts of vitamins are suggested as prophylaxis and for the general beneficial effects.

Psychosomatic Background of Peptic Ulcer. Psychiatric examinations of 33 young adult males with duodenal or gastric ulcer revealed characteristic psychic backgrounds in the entire group. The patients suffered from chronic frustration and inward direction of repressed, strong emotional stimuli with strong masochistic and sadistic tendencies. This chronic state of inward tension bears a close relation to the incidence and recurrence of peptic ulcer. It appears that peptic ulcer is a psychosomatic disease.

Nervous Stomach. The diagnosis of "nervous stomach" should depend upon elimination of organic disease in the upper abdomen. The success of treatment depends upon an understanding of the mental problems of the individual and the power of mental suggestion and encouragement.

Gastric Acidity in Tuberculosis. As the degree of pulmonary tuberculosis progressed, the incidence of gastric anacidity increased. Significant fever caused an increase in incidence of achlorhydria. Anemia, *per se*, did not affect the degree of acidity. There was no increased latent period in the secretion of acid, the gastric response following a normal pattern. This article is of interest because of the possible association of poor appetite in tuberculous patients with gastric anacidity.

AMERICAN JOURNAL OF DISEASES OF CHILDREN

Vol. 65, March 1943

*Calcium and phosphorus requirements of premature infants. H. R. Benjamin, H. H. Gordon and E. Marples.—p. 412.

Calcium and Phosphorus Requirements. Five premature infants fed at low and high levels of mineral intake received large amounts of vitamin D. All retained a greater portion of both minerals than do full-term infants. Utilization of calcium of cows' milk was greater than of human milk; an indication that the latter is not the food of choice unless supplemented with minerals. Three standards of calcium requirement were set for minimum, optimum and maximum intakes.

AMERICAN JOURNAL OF MEDICAL SCIENCES

Vol. 205, March 1943

*Minerals and the toxemias of pregnancy. C. T. Javert, C. Macri and K. Kuder.—p. 399.
*The specific dynamic action of protein. M. S. Abel.—p. 414.

Minerals and Toxemia. Clinical observations of antepartum patients indicate that mild and severe eclampsia seldom occur if iron is administered. In the last trimester of pregnancy, 539 women received iron therapy as iron ammonium citrate, ferrous sulfate, or "Endomin." The incidence of toxemia of pregnancy in all patients on supplements was 4.4% or 24 cases in all. Success of the treatment is attributed to apparent association of physiologic anemia, edema, hypertension and preeclampsia.

Specific Dynamic Action of Protein. A technique of obtaining the SDA of protein is described whereby a high-protein test meal of chicken and gelatin was used. The measure of the SDA has been the curve of 4 basal metabolic readings taken respectively immediately before the meal and 3, 5, and 7 hours later. This test may be of value in diagnosing borderline cases of hyperthyroidism and in determining the course of hyperthyroidism for appraisal of opportune operation time.

AMERICAN JOURNAL OF PHYSIOLOGY

Vol. 138, March 1943

*The effect of dietary composition on pancreatic enzymes. M. I. Grossman, H. Greengard and A. C. Ivy.—p. 676.

Relation of Pancreatic Enzymes to Composition of Diet. In rats maintained for three weeks on a constant diet, an adaptation of the composition of chief pancreatic enzymes to the predominant constituent of the diet was noted. On a high-carbohydrate diet there was pronounced increase in amylase, and a decrease in trypsin. A high-protein diet resulted in greatly increased trypsin and less extensive increase in lipase. On a high-fat diet there were essentially no alterations in lipase or trypsin. A diet high in fat and low in protein causes repression of all pancreatic enzyme formation. Addition of 1% choline to such a diet increases uniformly the content of all enzymes. The enzyme content of pancreatic juice parallels that existing in pancreatic tissue.

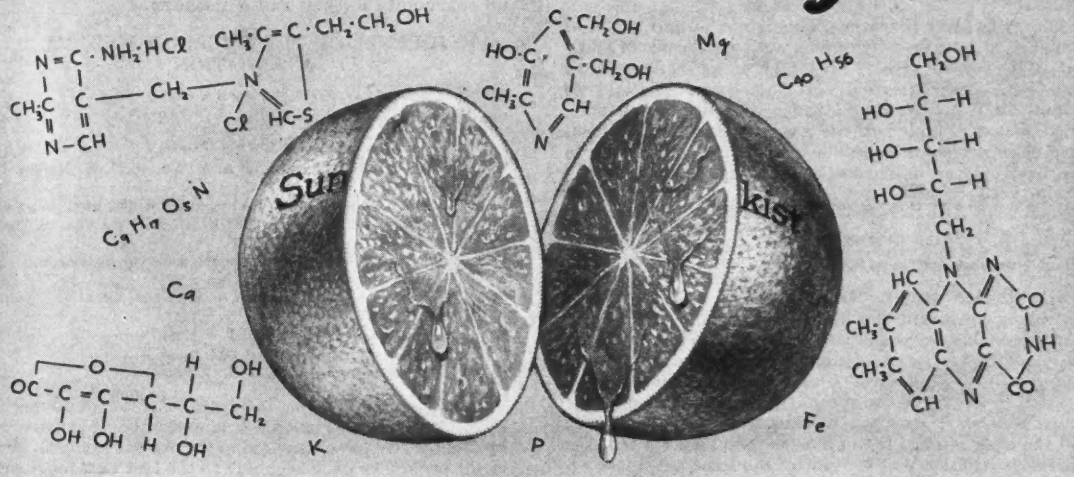
AMERICAN REVIEW OF TUBERCULOSIS

Vol. 47, March 1943

*Vitamin nutrition in tuberculosis. H. R. Getz and T. A. Koerner—p. 274.

Vitamin Nutrition in Tuberculosis. The level of vitamin A in the plasma of recently diagnosed tuberculous patients was lower in proportion to the extent of tuberculous involvement. The level of ascorbic acid in the plasma was lowered with tuberculous involvement. Nontuberculous patients in the clinic population studied were malnourished in vitamin A and ascorbic acid. Females had less vitamin A and more ascorbic acid than males. Negroes were more malnourished in both vitamins than were white subjects.

What's in an Orange?



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Food restrictions are causing consumers to ask many questions unheard a few months ago. As you are the logical interpreter of nutrition knowledge, you must have accurate information at your fingertips, to help answer those questions arising from the public's newly awakened interest in nutrition.

Thus we feel you will welcome this concise and accurate table of all the known nutrients and food-related substances found in an orange. Although some are present in relatively small amounts, they contribute to the sum total of nutritional needs—a consideration in our wartime food economy.

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NUTRIENTS OF FRESH CALIFORNIA ORANGE JUICE

Average Per Ounce (28.4 ml.)

Vitamin A (as Carotene)	80.	Int. Units	Calcium	5.	milligrams
Vitamin B Complex			Phosphorus	4.	milligrams
Thiamin	0.03	milligrams	Iron	0.07	milligrams
Riboflavin	26.	micrograms	Potassium	51.	milligrams
Niacin	0.06	milligrams	Magnesium	3.	milligrams
Pantothenic Acid	20.	micrograms	Sodium	0.5	milligrams
Pyridoxine	24.	micrograms	Citric Acid	0.3	grams
Inositol	1.33	micrograms	Sugar	2.7	grams
Biotin	420.	micrograms	Pectin	0.1	grams
Vitamin C	15.	milligrams	Protein	0.18	grams
			Calories	15.5	

pH 3.6

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ANNALS OF INTERNAL MEDICINE

Vol. 18, March 1943

*Allergy to injectable liver extracts: clinical and immunological observations. S. M. Feinberg, H. L. Alt and R. H. Young.—p. 311.

Allergy to Liver Extracts. This is not so uncommon as it appears. A survey of 48 patients showed 6 cases of sensitivity. Common usage of the long interval method allows for more ready sensitization; or it may be that a special type of antigen is associated with the antianemic principle. Treatment of allergic patients has consisted of discontinuance of injections, a course of desensitization, change to beef liver extract, or the oral use of liver.

ARCHIVES OF PEDIATRICS

Vol. 60, March 1943

*Allergic dermatoses due to food hypersensitivity. R. M. Wingard.—p. 139.

Allergic Dermatoses. An attempt was made to recover sensitizing agents in the blood of patients with allergic dermatoses due to food hypersensitivity. The autoserum collected after ingestion of clinically culpable foods evoked a delayed skin reaction in 6 of 9 patients studied. The reaction is believed to be specific in nature. Resemblance between delayed response to skin tests with autoserum and the basic clinical lesion in each case suggests that the cutaneous reaction was evoked by the same substance responsible for the clinical lesion.

BRITISH MEDICAL JOURNAL

No. 4287, March 6, 1943

*Standardization in communal feeding. Editorial.—p. 293.
*Food yeast. Editorial.—p. 294.
*Nutrition in pregnancy. Editorial.—p. 297.

Standardization in Communal Feeding. Communal feeding may develop in England after the war and there is need of a set of standards for food values, hygiene and cleanliness. In Russia it is considered that food depots provide food more economically and with better conservation of nutritional values than most domestic kitchens. Approximately 60,000 Russian food depots prepare food in all but its final stages to send to canteens in factory or school. Many are equipped with chemical and bacteriological laboratories. Provision is made for serving special diets. About 600,000 workers take their meals in factory canteens.

Food Yeast. A microorganism in waste molasses to which ammonia has been added has been found to contain as much as 50% high grade protein, 20 μg. aneurin, 60 to 80 μg. riboflavin, 60 μg. pantothenic acid and 400 to 450 μg. nicotinic acid. When dried, this "food yeast" is a flaky, straw-colored substance and has a meaty taste. It can be mixed with water or milk and added to soups and stews. Manufactured in Jamaica it will offer the United Nations a postwar solution in the supply of large populations with needed vitamin B complex and a high grade protein.

Nutrition in Pregnancy. After considering wartime statistics and diets, the only likely shortages in present-day feeding of pregnant women compared with prewar feeding were in animal protein, calcium and phosphorus, vitamin D and ascorbic acid but the deficiency, if any, of each of these was not enough to have affected significantly the birth weight of newborn infants.

CANADIAN JOURNAL OF PUBLIC HEALTH

Vol. 34, March 1943

Bacterial food poisoning. Part I. C. E. Dolman.—p. 97.
*Educational techniques for nutrition. L. B. Pett.—p. 121.

Educational Techniques for Nutrition. There are two activities in nutritional education, publicity and education. Movies, radio, newspapers, posters and public speeches stir up interest in further study or education. Schools, nutrition classes, nutrition committees for factory employees, posters in restaurants and food stores produce more permanent results. The support of libraries and professional groups should be enlisted. There is a particular need for trained group leaders in rural areas to build up community interest and enthusiasm.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Vol. 121, April 3, 1943

*Food poisoning. Editorial.—p. 1156.

Vol. 121, April 17, 1943

*Hypertension in people over forty. A. M. Master, H. H. Marks and S. Dack.—p. 1251.
The relation of vascular disease to the hypertensive state based on a study of renal biopsies from one hundred hypertensive patients. B. Castleman and R. H. Smithwick.—p. 1256.
*The administration of egg white and avidin concentrates to patients with cancer. C. P. Rhoads and J. C. Abels.—p. 1261.
*A high-protein beverage. L. Bauman, with the technical assistance of H. Gage.—p. 1283.
*B_1 vitamin hypoimmunity. Editorial.—p. 1284.
*Vitamin E deficiency. Editorial.—p. 1285.
*Botulism. Current comment.—p. 1286.

Food Poisoning. The incidence of food poisoning in U. S. Army troops is much less than that being experienced by other armed forces engaged in the present conflict. Most of the outbreaks have been due to the fact that foods such as potato salad, ground meat and sliced ham have been processed too long in advance of serving or have been stored under conditions favoring bacterial growth. The cause and source of infection have not been discovered in many instances because the personnel involved have been convinced that physical factors or bacteria such as the Staphylococcus were the only agents involved in the outbreak, conclusions not justified in many instances. The detection of permanent food handling carriers of Shigella or Salmonella and their removal from this type of work definitely limit the possibilities of subsequent outbreaks. If the examination of the outbreak is perfunctory and staphylococci are blamed for the outbreak without adequate investigation for other possible organisms, corrective action will not be taken and the outbreaks will continue to occur.

Hypertension. Forty-one per cent of the male and 51% of the female population 40 years of age and over would be expected to have blood pressures of 150/90 or over. At age 50 and over this ratio would be 50% in males and 62% in females; at age 60 and over, 60 and 70%; and at age 70 and over, 66 and 74% respectively. The incidence of hypertension rose with each decade of age up through the eighth and in the case of systolic hypertension, through the ninth. The incidence of hypertension was higher in women and rose precipitously between 40 and 60 years of age, faster than in men. Systolic hypertension increased more rapidly than diastolic hypertension, resulting in an increase of pulse pressure with age. The presence of hypertension at age 40 and over is so common that a mild degree and perhaps even a "moderate" degree can no longer be considered abnormal. Limits of normal blood pressure at these ages should therefore be raised.

Cancer Treatment. When one patient with mammary cancer and one with lymphatic leukemia were fed for 30 weeks from 16 to 40 times the amounts of avidin necessary to bind *in vitro* the limited amounts of biotin in their diets, no clinical evidence of biotin deficiency was induced in these subjects nor were the amounts of biotin excreted in their urine abnormally low.

High-Protein Beverage. Low-serum proteins are encountered in a number of conditions, including diseases of the liver, kidney, stomach and intestine and during protracted convalescence from operations on the alimentary canal, *e.g.* after abdominal perineal resections of the rectum and in extensive and prolonged infections of burns. Solid foods may be inadvisable or unacceptable, and the intrave-

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nous injection of proteins or amino acids over a prolonged period may not be entirely practicable or economical. A beverage rich in biologically important proteins with a base of milk or evaporated milk to which egg white and powdered milk are added, is suggested and the formula included.

B_1 Vitamin Hypoimmunity. That thiamin has a somewhat stimulating effect on the poliomyelitis virus is tentatively suggested. Whether or not vitamin B_1 possesses a similar synergistic action with other viruses, has not yet been determined. The tentative conclusion is that the maximum natural resistance to poliomyelitis virus is obtained from a minimum full maintenance level of vitamin B_1 intake and that intakes either above or below this level cause decreased resistance.

Vitamin E Deficiency. Elucidation of the biochemical defect induced by a deficiency in vitamin E is significant not only on its own account but also because it helps to temper the concept of functional specificity of the vitamins.

Botulism. The necessity of the pressure cooker with an accurate gage or thermometer for nonacid foods, such as string beans and corn, is emphasized. Any such foods that have been processed in any other manner must be reboiled for at least 15 minutes before tasting or using. "Any home-canned food that shows the slightest evidence of spoilage should not even be tasted, for the toxin of the botulinus bacillus is the most powerful poison known."

JOURNAL OF HOME ECONOMICS

Vol. 35, April 1943

Soybeans for human food. W. D. Salmon.—p. 201.
*Soybeans in the diet. J. K. Hale.—p. 203.
Soybean studies in Illinois. J. I. Simpson.—p. 207.
*Effect of different cooking methods on soybean proteins. H. T. Parsons.—p. 211.
Home dehydration of chili. E. M. Lantz.—p. 222.
*Idaho's dried onions. G. Manning.—p. 227.

Vol. 35, May 1943

*Ascorbic acid in home-canned tomato juice. H. M. Hauck.—p. 295.

Soybean Products. The most successful method of using soybeans proved to be in combination with wholewheat flour or corn meal and with yeast breads of all types. Because of their high-oil content, soybeans do not grind readily without preliminary drying by partial roasting. For drying, the beans were placed in thin layers in trays in the oven and heated until they began to crack but not until they turned brown. This process also drove off a great deal of the objectionable flavor and produced an appetizing odor in the flour. Beans should be stirred to prevent burning while in the oven. Cooling the beans before grinding improved the condition of the meal and reduced milling trouble. Pre-roasted soybeans were ground at local grist mills, producing a meal somewhat coarser than wheat flour but highly satisfactory for practical use. This meal can be used half-and-half with corn meal or whole wheat flour. It cannot be mixed with white flour in as high proportion unless more yeast is added. Soybean meal contains little or no gluten and bakes differently from wheat flour. More yeast was required for yeast breads in which soybean meal was used.

Soybean Protein. The fundamental explanation of the beneficial action of moisture and heat on soybean protein has received detailed study at Wisconsin. Hayward, Steenbock, and Bohstedt concluded that ". . . heat caused some essential protein fraction, which was unavailable in the raw soybean, to become available for absorption and metabolic use." In a later study, by Johnson, Parsons, and Steenbock in 1939, it was shown by nitrogen and sulfur balances that the difference in the absorption of the raw and heated soybean proteins by rats was comparatively negligible and, hence, failed to furnish an adequate explanation of the difference in their nutritive values. Instead, the explanation appeared to lie in the relative unavailability, in metabolism, of some unknown S- and N-containing complex in the raw soybean, which although absorbed, tended to be excreted, probably unused, in the urine; heating the soybean made it available to the body.

Dried Onions. Experiments show that dehydrated onion shred and powder can be successfully substituted for fresh onions in many recipes, such as fried onion shreds with bacon, glazed and sautéd onion, onion soups and stuffings, onion shortcake, Dutch stew, and French fries. Six level tablespoons of the powder are the equivalent of one medium-sized onion. If the cooking time of a product is less than 20 minutes, shreds may require soaking for about half an hour in cold water before cooking. Shreds can be substituted for fresh onions in almost every dish except green salad. The powder can be sprinkled on dry foods, mixed into a paste and added to liquids, or stirred into the salad dressing.

Home-Canned Tomato Juice. The observation that home-canned tomato juice canned in tin retains a higher indophenol-reducing capacity than does juice canned in glass has been confirmed. Contact with the metal seems to be the most important factor concerned, since values for tomato juice canned in unlined tin and in glass with a tin insert were similar, whereas juice canned in enamel-lined tin gave lower values.

This difference is probably due to the better preservation of vitamin C in tomato juice canned in tin rather than to a reaction of the metallic salts with the dye.

Cold expression of the juice from the tomatoes, with or without previous heating of the pulp, resulted in no better preservation of ascorbic acid in the home-canned juice than did expressing the juice from the hot pulp.

JOURNAL OF NUTRITION

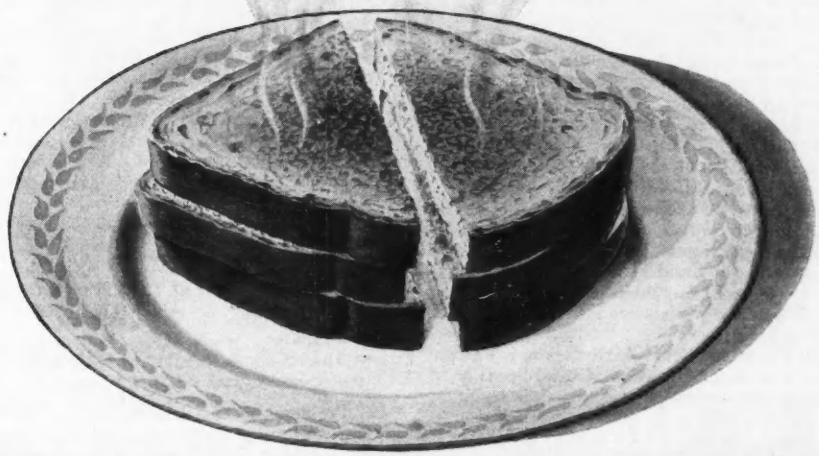
Vol. 25, March 10, 1943

*Further studies on riboflavin and thiamine in the rumen content of cattle. II. C. H. Hunt, E. W. Burroughs, R. M. Bethke, A. F. Schalk and P. Gerlaugh.—p. 207.
*Vitamin B complex studies in dogs: production of cirrhosis of liver. P. J. Fouts.—p. 217.
*Results of feeding rats a thiamin-low diet of a type consumed by human beings. G. M. Higgins, R. D. Williams and H. L. Mason.—p. 229.
*The effect of chloride with high and low-iodine supply on the thyroid gland of the rat. G. R. Sharpless and E. K. Anthony.—p. 239.
*The basal metabolism of normal college women. J. McCrery, M. W. Lamb and N. D. Bavousett.—p. 245.
*Influence of lecithin feeding on fat and vitamin A absorption in man.—p. 255.
*The vitamin B complex of peeled wheat bread. R. R. Sealock and A. H. Livormore.—p. 265.
*The nicotinic acid content of common fruits and vegetables as prepared for human consumption. W. C. Russell, M. W. Taylor and J. F. Beuk.—p. 275.
*Nutritive adequacy of certain low-cost food mixtures. F. Hemphill, R. A. Koenig and J. Winters.—p. 285.
*Digestibility of some animal and vegetable fats. R. Hoagland and G. G. Snider.—p. 295.
*The availability of calcium of some New Zealand vegetables. J. Kelly.—p. 303.

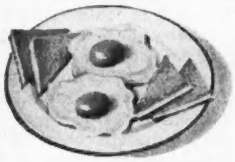
Riboflavin and Thiamin in the Rumen. Results with both whole corn as part of the ration and with a partially synthetic low-vitamin ration showed that there was a loss of thiamin in the ingesta in comparison with the feed, but the loss incurred decreased as the amount of corn or carbohydrates in the rations increased.

Diet and Cirrhosis of the Liver. A deficiency state characterized by weight loss, moderate anemia, dermal and peptic ulcers, fatty cirrhotic livers and death, develops in dogs fed a low-protein diet supplemented with thiamin, riboflavin, nicotinic acid, pyridoxine and pantothenic acid. Administration of a high-protein diet prevents the condition although growth is suboptimal. It is not cured or prevented by para-aminobenzoic acid, inositol, eluate of a clay absorption of liver extract or by small amounts of choline. Partial clinical improvement follows administration of large amounts of choline, powdered liver extract

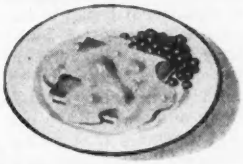
"Savory Toast"



THE *IDEAL* EXTENDER OF RATIONED FOODS

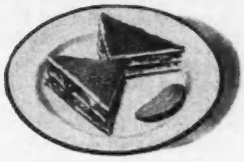


Toast with Eggs—many combinations



Creamed chicken, etc.—*always* with Toast

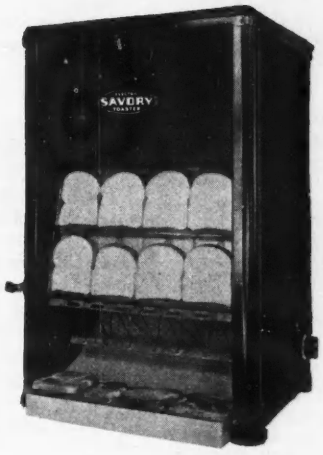
Vegetable Plate — Toast as a garnish



Sandwiches—*always better* when Toasted

Today toast is a *MUST* to bolster rationed food supplies. Every meal becomes more nutritious, more filling, more energy restoring, if toast is a part of the meal. *Savory toast is the most economical extender available.*

Think of Savory Toast and its scores of easy uses—*many of which you may be neglecting!* Toast as an integral part of the food—or as a garnish—will go far towards filling the void created by meat shortages.



Your government wants you to serve more bread. Savory toast—delicious, appetizing, health-giving—is the sure and easy way to speed up the consumption of plentiful cereals. You may be eligible at present under Limitation Order L-182 to obtain a Savory Toaster. Write us for information.

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or a "filtrate factor" prepared from rice bran extract. Combined administration of large amounts of choline and powdered liver extract produced rapid disappearance of signs of the deficiency although fibrosis of the liver persisted.

Feeding Rats a Low-Thiamin Diet. Human diets, adequate in protein, fat, carbohydrate, vitamins A, C and D and essential minerals, but deficient in certain fractions of the B complex, induced certain well-defined physical changes in rats. These changes, such as body weight, gross appearance, and the hypochromic microcytic anemia, were improved or rectified by adding thiamin and riboflavin to the flour from which the bread for human diets was made.

Chloride and Goiter. Feeding an excess of chloride decreases iodine concentration of the thyroid in both normal and iodine-deficient glands. Despite decreased iodine concentration in the glands, an excess of chloride did not significantly change the thyroid weight.

Basal Metabolism of Normal Women. There was no significant variation in the basal metabolism between age groups. The average basal metabolism was 1304 calories per 24 hours, 33.4 calories per square meter per hour, or 0.95 calories per kg. per hour.

Vitamin A and Fat Absorption. Active sprue is characterized by absence of usual elevation of total lipids or of vitamin A content of the serum following administration of the test dose of fat or vitamin A. Addition of lecithin to the fat and vitamin A tolerance tests enhances the elevation of total lipids and vitamin A of the serum, respectively. This effect is probably due to increased absorption and, to a lesser extent, to mobilization of hepatic deposits.

B Complex of Peeled Wheat Bread. Fresh bread made from peeled wheat flour contained (per gram): thiamin 3 μg., riboflavin 2.5 μg., nicotinic acid 35 μg., pantothenic acid 5.2 μg., pyridoxine 3.1 μg. and inositol 644 μg. The advantages of using high-vitamin yeast are evident in values for thiamin of 4.6, nicotinic acid, 44, in contrast to the above values for bread made with ordinary yeast. Peeled wheat flour contained (per gram): thiamin 5.8, nicotinic acid 72, pantothenic acid 9.6, and inositol 1100.

Nicotinic Acid in Foods. Nicotinic acid content determined by means of the microbiological method, was highest for fresh peas, asparagus and avocado pears and lowest for certain fruits and fruit juices. Seeds of legumes, both fresh and dried, gave fairly high values, while the values for root crops and blanched leaves were low. Considerable variation was found among different samples of the same crop. During cooking, there was loss of the factor which averaged as follows: fresh legumes, 8%; roots and tubers, 9%; flowery plants, 17%; and leafy plants, 22%. The cooking water contained from 2 to 41% (average 12%) of the total nicotinic acid; the liquid of canned vegetables, from 30 to 40% of the total nicotinic acid.

Adequacy of Low-Cost Food Mixtures. In a search for a basic combination of cheap foods, two of the low-cost food mixtures assayed and fed to rats were similar to the higher-priced mixtures in their vitamin and mineral contents and in the growth response produced in animals. The cheaper food mixtures cost approximately half as much as the higher-priced ones.

Digestibility of Fats. Results of feeding experiments with young male albino rats showed that there was no consistent relationship between the melting points of fats and their digestive coefficients.

Availability of Calcium. The calcium of milk is better utilized than the calcium of vegetables tested. Savoy cabbage is an excellent source of calcium which is 93% as available as that of milk. The calcium of Swede turnips and parsnips is very well utilized: 87 and 88% respectively, that of milk. Silver beet greens are a poor source of calcium which is only 46% as available as that of milk.

JOURNAL OF PEDIATRICS

Vol. 22, March 1943

Assessing the physical condition of children. III. The components of physical status and physical progress and their evaluation. N. C. Wetzel.—p. 329.

*An association of gastrointestinal allergy with the celiac syndrome. C. F. McKhann, S. Spector and E. R. Meserve.—p. 362.

Celiac Syndrome. At times gastro-intestinal allergy seems to be associated with celiac syndrome. Whether allergy is secondary to a disturbance of absorption dependent on celiac syndrome or whether food sensitization precedes and is responsible for the symptomatology of celiac disease is not clear. That absorption from the gastro-intestinal tract of vitamin A may be impaired in conditions due to allergy but in which gastro-intestinal symptomatology is minimal, suggests degrees of impairment of absorption on an allergic basis and may bear a casual relationship to the celiac syndrome.

JOURNAL OF ROYAL INSTITUTE OF PUBLIC HEALTH AND HYGIENE

Vol. 6, January 1943

*Problems of war-time nutrition. Lecture I. The background to the study of nutrition in war-time. J. C. Drummond.—p. 12.

Problems of Wartime Nutrition. In the last war vitamin and other deficiencies went unrecognized. Postwar days proved that "health is purchasable," and the poor could not afford the protective foods. Home production during this war has not only called for careful planning on a nutritional basis; it has required skill in maintaining a sound agricultural balance. In the vegetable-planting program the consideration was yield per acre of vitamin A, hence the stress on carrots. It was decided to try to supply all vitamin needs from natural foods since this could be done and we still do not know all the essential factors. The danger of making the population "vitamin-conscious" if synthetic preparations were used was considered seriously. Importation of fruit, a bulky cargo, was stopped since vitamin C could be supplied by home-grown vegetables. Protein foods needed to be imported but space had to be saved, thus boning and compressing of meats and finally dehydration have been adopted.

LANCET

Vol. 244, February 20, 1943

*Food tables. Their scope and limitations. E. M. Widdowson and R. A. McCance.—p. 230.

Food Tables. The chemical composition of individual mixed diets as determined by direct analysis of duplicate portions is sufficiently close to the results calculated from food tables to warrant the use of food tables in dietary surveys. Up to 200 mg. calcium a day may be obtained from drinking water in some districts. Iron intakes as calculated from food tables should be regarded as minimum values, considering the possible contamination from various cooking utensils.

MEDICAL OFFICER

Vol. 70, February 20, 1943

*An evacuation unit for diabetic children. H. G. Cairney, M. Stewart and H. Smith.—p. 61.

Evacuation Unit for Diabetic Children. Outlines the setup and administration of a wartime residential unit for diabetic children. In postwar planning of state education, consideration should be given to permanent provision of residential accommodation for diabetic children, preferably associated with a school for normal children.

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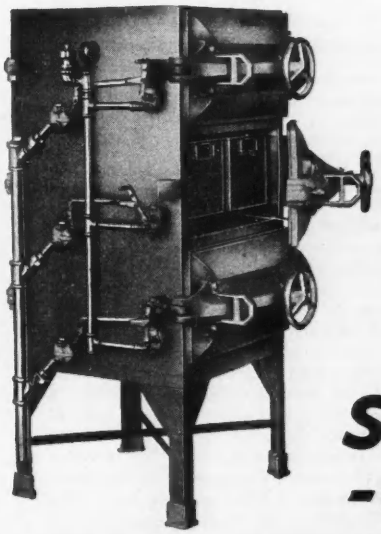

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THE MILBANK MEMORIAL FUND QUARTERLY

Vol. 21, April 1943

*Nutritional status of aircraft workers in southern California. H. Borsook, E. Alpert and G. L. Keighley.—p. 115.
*Recent changes in income and food expenditures among tuberculous families in Harlem. J. Downes.—p. 158.
*A study of food habits of tuberculous families in a Harlem area of New York City. J. Downes.—p. 164.

Nutrition of Industrial Workers. Special examinations for nutritional status on nearly 1200 industrial workers indicate that the prevalence of specific deficiencies varied greatly and was affected by great variation in sensitivity of the criteria applied in diagnosing mild deficiencies. Thus, 2% gave clinical evidence of severe niacin deficiency; 11% had hemoglobin values indicative of mild anemia; 32% had plasma ascorbic acid concentrations below 0.4 mg. %; 9% showed facial dermatitic signs of riboflavin deficiency but nearly everyone had some degree of corneal vascularity associated with riboflavin deficiency; and, by the criterion of conjunctival thickening or opacity for vitamin A deficiency, 50% of the men had grossly visible localized conjunctival elevation and the remainder showed some degree of opacity or translucency on biomicroscopic examination. These findings corroborate evidence from dietary studies that few persons consistently eat a diet which furnishes entirely adequate amounts of all essential nutrients.

Income and Food Expenditures of Tuberculous Families. Expenditure of sufficient money for food does not necessarily ensure a good diet. To obtain a good diet with a minimum expenditure requires careful management and some knowledge of food values. A study of food habits in these families has shown that there is a relationship between the quality of the diet and the amount of money spent for food. However, 44% of the families had food habits rated as "fair or poor" even when the food expenditure was considered satisfactory. Even though income in the families has increased considerably, and on the average expenditures for food are now within amounts required for a good diet, it is wise to continue instruction as to proper food habits.

Food Habits of Tuberculous Families. A relatively high proportion of the tuberculous families in Upper Harlem (New York) had food habits considered as unsatisfactory and probably indicative of certain dietary deficiencies. Less than 10% of the families studied had dietary patterns corresponding to a recommended standard. Seventy-one per cent were considerably below the standard pattern believed necessary for the maintenance of good health. After a period of supervision, 51% were in that class. Perhaps the most important point brought out by the study is that improvement in food habits can be obtained in families under public health supervision where sufficient emphasis is placed upon teaching what constitutes a good diet. Measures for the preservation of good health and for increasing resistance to infection are especially important for family members who have been exposed to tuberculosis. Consequently, teaching with regard to a good dietary pattern for these families may be considered a proper function of the public health nurse. Another point of some interest is that routine teaching as to the need for a good diet for the tuberculous patient has little or no effect upon the family dietary pattern. "The tuberculous patient is sick, and recommendations for the treatment of the sick usually are not interpreted as applying to the apparently well." Dietitians responsible for taking food histories will be interested in the appendix to this article which gives a method of rating weekly food records of the intake of specific food groups. For instance, 5 or 6 eggs or more a week are rated as excellent; one or no eggs, poor; yellow or green vegetables used per week—seven times or more, excellent; two, one or no times, poor; and so on.

PENNSYLVANIA MEDICAL JOURNAL

Vol. 46, February 1943

*The nutritional condition of Philadelphia school children. W. S. Cornell.—p. 474.

Nutritional Condition of Philadelphia School Children. About 8% of the pupils suffer from poor nutrition, the incidence being greater in older children and greatest in girls of high school age, for reasons probably not economic. Clinical signs of poor nutrition are not noticeably greater among Negro children. It is concluded that the causes of poor nutrition in city school children are related definitely to insufficient and faulty diet, but poverty and ignorance must also be corrected to accomplish any substantial and permanent improvement.

PUBLIC HEALTH REPORTS

Vol. 58, March 5, 1943

*Experiments in the cooking of garbage for the destruction of trichinae in pork scraps. W. H. Wright.—p. 396.

Destruction of Trichinae in Pork Scraps. The boiling of garbage for 30 minutes in an open container will effect destruction of trichinae larvae in pieces of pork up to 3 inches thick and probably in larger pieces if garbage is allowed to cool gradually. Such procedure would seem to be an effective measure for preventing swine trichinosis primarily and human trichinosis secondarily.

SCIENCE

Vol. 97, February 5, 1943

*Food and nutrition as related to the war. C. G. King.—p. 129.

Vol. 97, February 12, 1943

*Production of pantothenic acid deficiency in mice with pantoyl-taurene. E. E. Snell, L. Chan, S. Spiridanoff, E. L. Way and C. D. Leake.—p. 168.

Vol. 97, February 26, 1943

*The influence of biotin upon susceptibility to malaria. W. Trager.—p. 206.
*Relation of food intake to response of mice inoculated with Lansing strain of murine poliomyelitis virus. C. Foster, J. H. Jones, W. Henle and F. Dorfman.—p. 207.

Vol. 97, March 5, 1943

*Post-war food supplies. Editorial.—p. 215.
*Nutritional standards. Science News.—p. 12.

Vol. 97, March 12, 1943

*Food production in French North Africa. Science News.—p. 10.

Vol. 97, March 19, 1943

*Sunflower-seed oil. Science News.—p. 8.

Food and Nutrition in the War. Nutrition in wartime has many angles. The problem of what food will best keep our pilots constantly alert at quickly changing altitudes, the type of ration that will best serve the men in the tanks in the desert, and the big problem of promoting adequate nutrition in rationing of industrial and other civilian population, each requires further and specific research.

Pantothenic Acid Deficiency. It appears that pantoyltaurine, a compound highly similar chemically to pantothenic acid, interferes specifically with the metabolism of pantothenic acid in animals, as it does with microorganisms.

Biotin and Susceptibility to Malaria. Animals with a relatively low initial biotin level are more susceptible to malarial parasites than those with a higher initial level. The increase in biotin which occurs during the course of infection may be concerned with elimination of parasites from the blood.

Relation of Food Intake to Poliomyelitis. Restricting the intake of either the complete ration or just the carbohydrate delays the manifestation of infection with poliomyelitis virus in mice.

Postwar Food Supplies. Recovery from the serious decline in live stock and milk production in enemy-occupied

ANSWER: Blow . . . hard . . . into the mouth of the glass causing the card to tip. The nickel will then slide into the glass.

TRY IT! *Place a nickel on a calling card atop a glass. Without touching the card, drop the nickel into the glass. Answer above.*

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allied countries will take many years. A lack of draught animals may be a real hindrance to cultivation for the first postwar harvest. Conservation of live stock, supply of feeding-stuffs, veterinary measures and introduction of tractors are among the means recommended by agricultural experts.

Nutrition Standards. Reconstruction in the postwar world and advances in civilization and culture, will depend largely on a higher nutritional standard. Prewar consumption, as studied by the Food and Nutrition Board, National Research Council, showed the following deficiencies: 59% in green and leafy vegetables, 45% in milk, 28% in citrus fruits and tomatoes, 25% in beans, peas and nuts, 17% in eggs, 14% in tomatoes, 4% in meat, poultry and fish, and 2% in flour and other cereals. There was an excess production of 8% in butter and other fats, and of 15% in sugar. To right this, even for the United States alone, will require almost revolutionary reorientation of our agriculture.

Food Production in French North Africa. Agricultural North Africa this year may produce foods to take care of its native population and to feed allied troops in the area if crops can be planted during the next month or two. Seeds, fertilizers and farm machinery and repair parts are essential needs. Irrigation systems must be restored. Fuel for tractors and farm trucks must be supplied. In the past French North Africa has produced much more food than was needed locally but the Axis has bled the land. A food production program has been set up by the United States, Great Britain and the local authorities. Shipping space may thus be saved and French North Africa may become the larder for an impoverished Europe.

Sunflower-Seed Oil. Sunflower-seed oil, obtained in large quantities from certain varieties of the common sunflower, is a possibility in the United States to help compensate for the shortage in edible oils due to war conditions.

SOUTHERN MEDICAL JOURNAL

Vol. 36, March 1943

*Some observations on the use of nicotinic acid amide as an adjunct in obstetric analgesia: A preliminary report. J. R. Perdue.—p. 198.
The clinical significance of the serum proteins. B. M. Kagan.—p. 234.
*Carbohydrate and the liver. Editorial.—p. 242.

Niacin Amide in Obstetric Analgesia. When pregnant women were given nicotinamide during labor under barbiturate-hyocine analgesia less maternal restlessness was noted and fewer babies required resuscitation. The physiology, metabolism and excretion of nicotinamide are very little known but the toxicity is low.

Carbohydrate and the Liver. Contrary to the usual belief Ravdin contends that the glycogen content of the liver does not increase on carbohydrate unless the patient is receiving adequate calories and protein which he cannot obtain by the intravenous route. Injury to the liver has been demonstrated in dogs on a protein-free ration. Vitamins are also mentioned in conjunction with protein as aiding liver function. Liver is reported to facilitate regeneration of the liver most rapidly.

AMERICAN RESTAURANT MAGAZINE

Vol. 27, January 1943

Five-star meat extenders.—p. 10.
*Wartime food and menu problems. C. A. Patterson.—p. 20.
*Dishwashing and handling practices in the restaurant. C. L. Henry.—p. 24.
*Another issue of "Your Food" is on the way!—p. 33.

Vol. 27, February 1943

Oldsters solve help problem for Dutro. J. V. Malone.—p. 21.
*Pre-portioning an answer to food restrictions.—p. 28.
*"Know how" saves labor, material, money. A. M. Macfarlane.—p. 30.

Vol. 27, March 1943

Coffee misbranding watched.—p. 18.
*Feeding Kaiser's miracle men.—p. 24.
Nutrition bogged down?—p. 28.
*A costly tidbit. B. V. Tornborgh.—p. 33.
News reel on reducing breakage.—p. 33.
*Those souffle cups are really helping. G. L. Wenzel.—p. 37.

Selective Meal. This is the most advantageous method of serving meals in restaurants. The price for the entire meal is determined by the principal dish accompanied by suitable garnishing vegetables and other courses. The selective meal makes the principles of nutrition easier to carry out, saves cost, eliminates waste, and pleases the public.

Dishwashing. Classify dishes at the soiled dish table; preflushing is an important step before sending dishes through the machine; wash water should be between 130 and 140°F., rinse water, from 175 to 180°F.; maintain a concentration of alkali sufficiently strong to do a thorough job of cleaning; the best method of drying is by air; study the hardness of water; the rotary type brush is superior to spray type for glass washing; a detarnishing sink is excellent for washing silverware.

Your Food. A 4-page folder, "Your Food," is available for restaurants for their patrons. This booklet contains the following: "What about food shortages? Why must they be? How will they affect national nutrition? When will they be ended?" and the reason for slower service. The booklet may be obtained from *American Restaurant Magazine*, 5 S. Wabash Avenue, Chicago, at these rates: 500 folders, $3; 1000 or more, $5 per thousand.

Paper Cups for Pre-Portioning. The use of paper food cups of known capacities helps control the portion sizes of various foods and often gives the sense of added value and the impression that the serving is actually larger than it really is.

Training Course in Teaching of Employees. The labor turnover in restaurants has created the need of a training program which will teach workers to do a job well in the shortest possible time. The Business Service of the U. S. Office of Education has made available to restaurants and distributive industries a Wartime Training Program. It is stressed that if a worker does a job incorrectly, it is usually because he has been taught improperly. Benefits of teaching employees are that they can do better work in a shorter length of time, labor turnover is reduced because the employees are more interested in their work, less supervision is required, employees are in line for quicker promotion, better service for the customer is secured, morale is higher and better employee-employer relationships are established.

Feeding Defense Workers. In the Hudson House dormitory for Vancouver shipbuilders 1900 persons are served at one time by a staff of 175 employees, two-thirds of them women, who serve 5500 meals and 1500 to 1600 box lunches daily. Breakfast and dinner are served in the dining hall boarding-house style. Because of shift work they are served simultaneously. A carefully planned routine enables the serving of 1200 people an hour. Prior to opening, tables are set up and salads, bread and butter and dessert are placed. Just before the doors open trucks carrying pitchers of coffee, soup and milk go into action. The men are directed to tables nearest the door first to facilitate the most orderly and fastest service. Waitresses wheel seven-tiered trucks holding enough hot entrées and vegetables for 7 ten-man tables. The second dining room is then opened and in the first the tables nearest the entrance are cleared and reset as fast as they are evacuated. Current shortages call for substitutions: cornstarch filler is used in mayonnaise, powdered milk in various dishes including mashed potatoes. Fish and poultry are often served in place of beef; more pork, veal and lamb are being used and such "meat stretchers" as chicken and noodles, meat loaves, meat balls and stews. Soups and salads are favorites. Box lunches are prepared by 12 women. An "assembly

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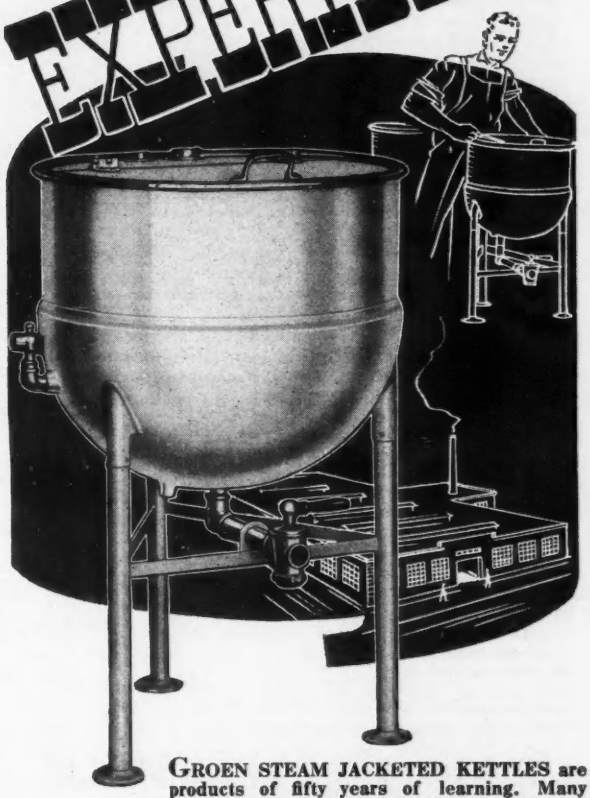

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line" is used to make the 4800 big sandwiches. The per capita food cost per day ranges from 81 to 94 cents. The dining hall estimates its average food cost from 45 to 52% of the revenue dollar.

Cost Records. Cost records are cited as the main control item for restaurants in this article. Points of operation to check for leaks include limiting your menu reasonably; shopping for profitable cuts and economical sizes; verifying your deliveries for quantity, quality and weight; running the most economical employee meal plan; balancing the meals nutritionally and as to price; controlling loss from petty pilfering; checking waste from the amount prepared and the amount of usables discharged; using standardized recipes and portions; using substitutes to meet shortages. Figures should cover quantities and amounts purchased, items produced, items consumed, inventories, payrolls and employee meals. These figures should be kept by department and by item so that losses can be found quickly and steps taken to check them immediately. Percentage food cost figures for classes of food service organizations were as follows: industrial cafeterias 48 to 50%; cafeteria and lunchroom 40 to 45%; medium class restaurant, tearooms 35 to 38%; first class restaurant, better coffee shops 38 to 43%; night clubs 25 to 32%.

Soufflé Cups. Soufflé cups control portions, save kitchen labor, reduce china breakage and dishwasher load. Already they are being used extensively for tartar sauce, cole slaw, apple sauce, jellies, marmalades, jams and sugar; also for syrup in the 2-oz. size, no. 48 cup, and for creamed vegetables, the 2½-oz. size, no. 49 cup. Recommends their use for fruit or vegetable salads and spiced fruits which are suggested as "extras" with the reduced meat portions.

BAKER'S HELPER

Vol. 79, March 13, 1943

*Fresh news from the Washington oven. W. Werble.—p. 24.
Longer life for bakery floors.—p. 30.
*OPA ups soft wheat flour prices.—p. 34.

Vol. 79, March 27, 1943

*Points to be allotted in shortening rationing. W. Werble.—p. 21.
*Factors affecting bread quality.—p. 23.
*Dough systems—with and without air conditioning.—p. 25.
*Ingredients . . . availability and use.—p. 32.
Proper care of doughnut machine.—p. 60.
Job training methods.—p. 62.
*Overcoming war obstacles.—p. 64.
Production shortcuts.—p. 66.
*Complaints and how to handle them.—p. 81.

News From Washington. Price Administrator Brown is non-committal regarding a raise in bread prices. Promises regional bread price relief. Effective March 12, GMPR is amended to provide a maximum price on bread crumbs of 10 cents per pound plus cost of transportation and packaging. Enactment of the Bankhead Bill will force a price rise. The wheat supply is ample to cover 1943 needs, but careless handling plus bad crop luck might cause shortages. No allotments of glycerine for food will be made.

Soft Wheat Flour Prices. Because rising soft wheat prices in the East have put a severe squeeze on flour millers, OPA on February 27 raised by approximately 8% the ceiling prices of soft wheat flours. Soft wheat prices will soon be checked by a ceiling. This soft wheat flour increase will affect consumer prices of crackers, biscuits, and cakes.

Washington News. Bakers as industrial users will be given allotments of points with which to buy shortening, or any other rationed products, on the basis of their 1942 use. Frozen egg control order under discussion proposes the limitation of freezing and using to 70% of last year. The addition of riboflavin to enriched bread and flour is expected to be mandatory by July 1. Bakers should check formulas to protect themselves with vitamin assays on their bread.

Bread Quality. Dough development by mechanical and chemical means is considered. Dough must be properly handled for gas production and gas retention produced by enzymes in malt breads and gas retention produced by the physical development. The importance of proper control over absorption, mixing time, and fermentation time is stressed, so gas retention can be balanced by gas production.

Dough Systems. An air-conditioning dough system controls the temperature and humidity of the air entering the dough, affecting the mass to produce a uniform product. A dry sanitary room is maintained. Fermentation in wooden cabinets, without air-conditioning, also produces a uniform product under sanitary conditions, and conserves time, material and labor.

Ingredients. Flour substitutes or requirements will not be presented before next year. The outlook for fats and oils is poor, and conservation will have to be practiced to the utmost. The milk situation is critical, although an increase this year of dry milk solids is estimated. Corn sugar has become almost unobtainable. Malt sugar is available. The outlook for the sugar supply is more favorable. Fat should be incorporated in the latter part of the mixing and mixture baked for a shorter time and at a higher temperature. Dry shortening may be used. Cereal products and sour cream buttermilk are good milk substitutes.

Overcoming War Obstacles. Rationing of eggs is expected soon. An increase in the chocolate supply is possible. Chocolate extenders are being used. Variation in sugar content of cake which can be made without seriously affecting the quality, is slight. With reduced shortening the method of mixing should be changed and less liquid used. There is no satisfactory substitute for milk in cake and icings. The use of eggs is needed particularly with reduction of other ingredients.

Handling Complaints. The ten most often presented methods of handling the problem of complaints are: Don't settle grievance immediately; explain what you do; remember that the customer or employee is usually right from his viewpoint; don't quibble; be quick to acknowledge an honest error as soon as it has been discovered; remember that "imaginary troubles" are very real and important to the individual harboring them; always keep close contact with your customers; "a person convinced against his will is of the same opinion still"; be careful of establishing a precedent in presenting your solution.

FOOD INDUSTRIES

Vol. 15, April 1943

Food production declining! L. V. Burton.—p. 47.
*A challenge to food technologists.—p. 53.
*Dehydrating fruits, vegetables in community canning plants. J. A. Schaller.—p. 56.
*Dehydration of fruits offers important wartime advantages. E. M. Mrak, H. J. Phaff, C. D. Fisher and G. MacKinney.—p. 59.
*Food packages keep pace with wartime restrictions. E. Shaw.—p. 64.
*The materials are available to meet packaging problems. G. Hightower.—p. 68.
*Protection against moisture vapor a must for Army packages. J. d'A. Clark.—p. 75.
*Roast beef with broth.—p. 82.
*New emulsifying agent.—p. 82.
*Butter extender.—p. 82.
*Soup in paper cups.—p. 85.
*Price support plan set up to increase food output.—p. 87.
*New container orders issued.—p. 88.
*Control of M-85 transferred.—p. 88.
*To concentrate salmon canning.—p. 100.
Food freezers have raw material problem.—p. 100.
Oils and fats supplies to increase.—p. 100.
*Thiamin in rice.—p. 119.
*Detecting spoilage.—p. 119.
*Necessary precaution in dehydrating.—p. 120.
Sweetening agents.—p. 121.
*Vitamin C in walnuts.—p. 122.

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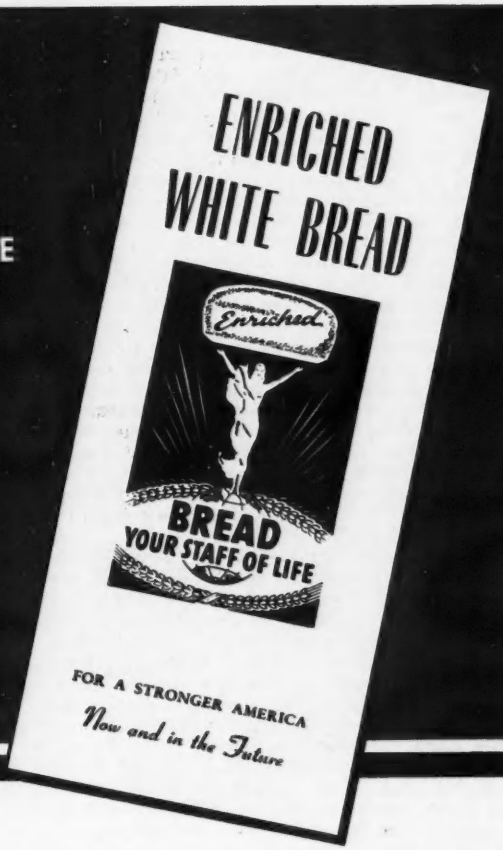

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Protein Supply. Greater yields from unusual raw materials, especially protein foods and edible fats and oils, are needed in large quantities. The greatest unused pool of potential protein food is the supply of peanut, soybean, and cottonseed meal after these products have been crushed for oil. Scientists and engineers in food technology must make an effort to put at least a billion pounds more of these meals into the usual food stream. Five steps include making present raw material of better grade by eliminating fragments from the haircloth of the press and other contaminants improper in food materials; providing facts about the dietetic value of each meal so that mixtures will contain adequate amount of the amino acids; discovering available materials to fortify meals with missing components and savoring materials to make them palatable as meat substitute; finding a practical technical means of preparing the product once it is nutritious and savory; and getting the approval and cooperation of the home economist in establishing its regular use in the home. Such a product must be so prepared and packaged that it may be made ready to serve with the use of ordinary kitchen methods and result in a mixture that looks attractive and tastes good. To develop such a product is today's challenge to food technologists.

Community Dehydration Plants. In the southeastern states 550 community canneries faced with the lack of tin cans are investigating possibilities of converting to dehydration methods of preserving fruits and vegetables. The objectives are to develop or adapt equipment, using the least amounts of critical materials, for dehydrating products on a community scale; to determine the best adapted preparation, processing, storage, refreshening and cooking methods; to determine the operating cost of the equipment and the economic value to the community; and to make this information available to interested educational agencies for use in 1943. A 50-bushel capacity dehydrater accommodating 4 drying trucks each holding 18 slotted wood trays was designed for use in existing community plants. Controls of temperature and humidity are included and data on detailed studies of operation.

Fruit Dehydration. The principal methods of drying are sun-drying, evaporation and dehydration. Apricots, nectarines, peaches and pears have been dried almost exclusively in the sun. Apples were usually done by evaporation, drying by artificial heat, circulated only by natural drafts. Dehydration is drying with artificial heat and mechanical circulation of the air. With slight variation, pretreatment for all methods consists of washing, cutting, pitting or trimming, traying and sulfuring. Due to can shortages, lack of transportation facilities, need for increased output and limited labor supplies, many operators will turn to dehydration as a method of food preservation. Dehydration requires a smaller number of man-hours per ton of fruit preserved than does sun-drying; is many times faster, taking a maximum of 24 hours as compared to 3 to 21 days in sun-drying; has superior sanitary procedures; results in a product often indistinguishable from the sun-dried product in color and standards if after sulfuring and before dehydration the fruit has been exposed to the sun, or more commonly, if it has been steam-blanched before sulfuring. For keeping qualities a high level of SO_2 must be retained by dehydrated fruit. In nutritive value dehydrated fruit is superior to sun-dried fruit because SO_2 gives a protection at high temperatures reached in dehydration; rapid reduction in moisture is also a protection; and blanching inactivates the oxidative enzymes. The blanching process is detailed, with tables of temperatures and times for steps in the dehydration process.

Wartime Food Packages. The outstanding change in food packaging caused by wartime restrictions on metal has been the increased use of glass jars for all types of food products. More recently substitutions have had to be found for the tinplate caps. Black plate, enameled black plate, fiber and plastic caps are all being used. Poultry packers have changed from latex bags for frozen products to moistureproof, moisture-vaporproof, airtight and greaseproof cellophane packages. Pliofilm, tinfoil, aluminum foil, are no longer available. Laminated cellophane is being used. The liquid-tight paper cup food container has been adapted to many more uses. Tinplate shaker-type containers for spices are replaced by all-fiber containers. Stoneware crocks are used for syrups, jams, jellies, etc. Shortage of metal shipping containers has forced the use of corrugated boxes. Multiwall paper bags are used extensively as shipping containers for flour, potatoes, sugar, salt and other staples.

Available Packaging Materials. Food packaging for the domestic market is a problem of doing the best possible with available supplies. Supplies of glass are ample for contemplated demands and breakage is not excessive but glass containers are reported to slow operations. Metal closures are redesigned in a lighter gage metal, with shorter skirts and more economical use of gasket rubber. When metal is not permitted for closures, "going into paper" seems to be the trend. Molded plastic caps are restricted by limitation of raw materials and manufacturing equipment. Paper has inherent disadvantages such as the lack of accommodation to tolerance in jar finish and those which are stiff enough to be put on by machinery can't adapt readily to wide variation in atmospheric temperatures and pressure. Thermoplastic moisture-vaporproof coating, sealing and protecting the cap, is one available closure, and a laminated cap sealed with thermoplastic is another. Crown closures for carbonated beverages which are reformed, sterilized, relined, dried and painted are expensive and unsatisfactory. Plastic closures won't remain tight under pressure of shipping. Shipping containers of processed fiberboard are needed because wooden boxes for Lend-Lease alone couldn't be supplied fast enough. A great increase in multiwalled bags is seen since they can be made waterproof, greaseproof, and as strong as burlap. Resin-impregnated bags, either cloth or paper, protect against contamination from dust, water, oil, grease or other nonedible material.

Army Packaging Requirements. The army is concerned with dividing food into convenient portions and packaging it to prevent spoilage under conditions of extreme temperatures, humidities, and air pressures. The advantages and disadvantages of several types of containers made from paperboard, lead foil, cellulose films, waxes, asphalt, and other noncritical war materials are described in detail. To be ideally suitable for overseas shipment Army packaging is required to withstand being dropped a number of times on a concrete floor with an impact equal to 100 ft. lb.; then withstand submersion in water for 4 hours without damage to the contents; withstand a temperature of 100°F. and 95% relative humidity for at least 20 days without appreciable effect on the packaging or contents.

Roast Beef With Broth. A new product on the market is sliced roast beef with broth, containing large, medium and small slices of beef, with salt, spices, and flavoring already to heat and serve. It is packaged in a heavy fiberboard container with a slip-over fiberboard top, containing 4 lb. beef with broth.

New Emulsifying Agent. "Short-Wel" contains flour, cereals, lecithin and salt and was developed as an emulsifier to ensure proper dispersion of shortening and fats or oils in the batch. Its high lecithin content is said to lower the surface tension of the fat, promoting a more even distribution throughout the dough. It is packed in 100-lb. and 300-lb. barrels solely for industrial use.

Butter Extender. Gelatinized starch, malt, powdered buttermilk, rennet and certified color are ingredients of the new butter extender called "Spread-mor." It is claimed to make 1 lb. of butter do a 2-lb. job. The extender is mixed with a quantity of lukewarm milk, gradually blended with the butter in a mixer, and cooled.

Fine flavor and fine nutrition in this "Guest-Quality" Margarine

FOOD ENERGY. 3,300 calories per pound

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DIGESTIBILITY. 95% to 97%

Allsweet margarine is made of pure, nutritious oils from American farms, scientifically mixed with pasteurized skim milk. Thus it is rich in food energy. And to every pound Swift adds more than 9,000 USP units of Vitamin "A" to *assure* the fulfillment of the accepted standards for a high-quality spread. Allsweet bears the Seal of Acceptance of the American Medical Association's Council on Foods.

But it's Allsweet's *flavor* that has made it so popular with consumers and many institutional dietitians alike. The "Guest-Quality" flavor that is so rich-tasting, so *fresh-tasting* that many, many people *cannot* identify Allsweet as a margarine. Furthermore, Allsweet's consistency is readily spreadable right out of the refrigerator . . . an important spread-*saving* advantage these ration days.

This good, tempting, nutritious margarine meets the requirements for institutions where nutrition is important.

SWIFT & COMPANY

Soup in Paper Cups. Smith's green pea soup mix is packed in a waxed "Nestrite" cup container manufactured by Lily-Tulip Cup Corp., contains 12 oz. which cooks in 3 minutes and yields one gallon soup. The mix contains dehydrated powdered peas, celery, onions, carrots, parsley, potatoes, vegetable protein derivative, artificial seasoning, salt and spices.

Price Support Increases Food Output. To increase farm food production this year, the government announced a new price support program which will assure farmers 20 to 50% higher prices than last year. At the same time ceiling prices to consumers will be held down. Canners will pay growers not less than 1943 support prices announced by USDA for tomatoes, sweet corn, snap beans, green peas, Lima beans, beets, carrots and cabbage for kraut. OPA will set flat dollars-and-cents prices for "supported" canned vegetables determined for regions by grades, can sizes, types and styles. Asparagus and spinach and the remaining minor vegetables for 1943 will be priced on a flat dollars-and-cents basis by regions.

New Container Orders. Conservation Order M-81 changed sizes of condensed milk cans from 15 to 14 oz.; permitted 50% of the manufacture of re-usable 5-gal. tin cans for liquid edible oils; permitted bacon to be packed in 24-oz. cans and butter, oleomargarine, and citrus concentrates in No. 10 cans for Lend-Lease.

Canned Food for Civilians. The Department of Agriculture, in taking over the administration of order M-86, made some minor changes that will result in a greater percentage of grapefruit, orange and pineapple juices set aside for the government but a small percentage of other fruits and juices. Changes in amounts of vegetables reserved mean an additional 10,000,000 cases for civilians.

Concentrate Salmon Canning. Alaska's salmon-canning industry is to be concentrated in 74 of the largest and most modern plants, made necessary by the large percentage of tender and power scows taken over by the armed forces and by the decreased supply of available labor. In spite of the cut the Alaskan pack is expected to increase this year, but not much will go to civilians in the U. S.

Thiamin in Rice. Studies of thiamin content of Arkansas-grown rice showed 1.83 to 3.07 mcg. thiamin per gram in the rough rice but a loss of 80.2% results in the finished clean polished head rice sold for human consumption. Experiments are continuing on parboiled and undermilled products to develop a product retaining more of the thiamin.

Detecting Fish Spoilage. Spoilage changes in fish begin at the surface so detection of incipient spoilage in fish fillets should be made on the surface. Contact plate counts and determinations of p_H, tyrosine and trimethylamine were used on cod and haddock fillets stored at 32, 41, and 50°F. Trimethylamine gave the clearest indication of spoilage changes. After 5 days at 41°F. surface values indicate fish is reaching a spoiled state while the interior indicates the fish is completely fresh.

Dehydrating Precaution. High bacterial counts result in a product from unsanitary plant conditions when inadequate or makeshift equipment and buildings are used. After 10 weeks, dehydrated foods with high bacterial counts have a foreign flavor and odor when rehydrated. Plant conditions can be improved and effective blanching of the product will result in proper dehydrated foods.

Vitamin C in Walnuts. High vitamin C values for edible walnuts have been confirmed by British workers who found 1.46 to 1.8% ascorbic acid in fruit packed while the kernel is soft, just before formation of the shell. Modern preserving destroys the vitamins, but soaking in 15% salt solution for 24 hours and then packaging in spiced vinegar will give an acceptable product of high vitamin C content.

HOTEL MANAGEMENT

Vol. 43, March 1943

*Training maids for better service. K. A. Lane.—p. 21.
*Tips on savings and waste.—p. 30.
*Here's how . . . to make specialty cooking appliances last!—p. 31.
Here's how . . . to make your table linens last!—p. 36.

Training Maids. A series of 21 pictures, part of a talking slide film, illustrates how Hotel New Yorker trains maids in etiquette and the proper method of bed-making and room cleaning.

Savings and Waste. The following are suggestions for waitresses on saving and waste problems: watch the return of food on plates; take orders straight the first time; give orders in the kitchen clearly and properly; save on left-over food from banquets; watch the laundry; don't overload trays; take good care of cleaning equipment; report equipment that is not working efficiently; use plates of the proper temperature; handle dishes carefully when washing; don't throw broken dishes into the dishwashing department; help the cashier; write checks carefully; take complaints seriously; don't go back and forth from the kitchen empty-handed; watch the heat and lights.

Cooking Appliances. Instructions are given for the treatment and care of the following cooking appliances: motor-driven mixers, slicers, and grinders, coffee-maker ranges, griddles, hot plates, waffle irons, plate and dish-warmers, ranges, glass coffee-makers, and toasters. Maintenance of appliances is broken down into those with motors and those with warming elements.

RESTAURANT MANAGEMENT

Vol. 52, April 1943

*Buffet service—one answer to the labor problem. R. T. Huntington.—p. 18.
Multiple meals in 20 minutes. L. T. Bolger.—p. 22.
Tile flooring.—p. 31.
*Seven food-saver suggestions.—p. 58.

Buffet Service as Time and Labor Saver. The Grand Hotel, Mackinac Island, Michigan, by adopting a modified type of buffet service, was able to get along with only 40% of its regular number of waiters and kitchen staff. The regular buffet service was favorably accepted for breakfast and lunch but the guests wanted more formality for dinner so a Victory Dinner was served, consisting of a limited menu so that the kitchen was able to operate on a production line basis. For the convenience of very old people and families with small children, limited menus with waiter service were offered at breakfast and lunch, but most of the people used the buffet service. Room service and coffee shop service were dispensed with during periods of dining room service.

Seven Food Saver Suggestions. Some food saver suggestions are to use small amounts of cooked vegetables with hard cooked eggs to make luncheon salads; shred the outside leaves of lettuce and serve with various dressings; cook outside leaves of celery and lettuce in soup stock; use left-over meat in assorted sandwiches; take care of equipment; wash rubber scrapers in warm water separately and save heavy metal cans of convenient size for the storage of food.

During Food Shortages...

It is well to bear in mind that dried brewers yeast, weight for weight, is the richest food source of the Vitamin B Complex. For example, as little as 1 level teaspoonful (2.5 Gm.) Mead's Brewers Yeast Powder supplies:

45% of the average adult daily thiamine allowance
8% " " " " " riboflavin allowance
10% " " " " " niacin allowance

— in addition to the other factors that occur naturally in yeast such as pyridoxine, pantothenic acid, etc. Following are suggestions for palatably mixing 1 level teaspoonful Mead's Brewers Yeast Powder:

(1) Shake in cocktail shaker with 4 ounces of milk (with or without 1 level teaspoonful sugar and cocoa).

(2) Stir with fork into ¾ ounce of ketchup or chili sauce. Optional, add a few drops of lemon juice.

(3) Stir with fork into 3 ounces of soup (preferably thick soups such as bean, pea, oxtail, beef, etc.).

(4) Spread on bread with 2 to 3 times the amount of peanut butter.

(5) Add 1 level tablespoonful (and a little extra salt) to 2 cups of meat stock gravy.

Mead's Brewers Yeast is supplied in 6-oz. bottles, economically. At the rate of even 2 level teaspoonfuls per day, per adult, a bottle should last over a month. Also supplied in 6-grain tablets. 250 and 1000 tablets per bottle.

Why not try this recipe at home? It makes good gravy taste meatier.
Send for tested wartime recipes containing yeast.

MEAD JOHNSON & COMPANY, Evansville, Ind., U.S.A.

News Notes

New Training Courses for Army Dietitians. According to information received April 19, training courses for Army dietitians will be increased to the point where approximately 100 student dietitians will be trained annually. At present Fitzsimons General Hospital, Denver, where Mildred Allbritton is head dietitian, and Brooke General Hospital, Fort Sam Houston, San Antonio, Texas, of which Nell Wickliffe is head dietitian, are developing courses similar to that now given at Walter Reed General Hospital, Washington. It is understood that the course at Fitzsimons General Hospital was to start around May 1 and that at Brooke General on July 1.

Insignia Authorized for Army Dietitians. According to information received from Major Helen C. Burns, Director of Dietitians, Army of the United States, under date of May 6, Army Regulation 600-35, Change 14, ruled that the dietitian commissioned in the Medical Department will wear the caduceus with the letters "HD" (Hospital Dietitian) superimposed. This corresponds to the insignia worn by the Army nurse, namely, the caduceus upon which a distinguishing initial is superimposed.

A. D. A. Dues, Army Dietitians in Foreign Service, Waived for Duration. As stated in this JOURNAL for April, American Dietetic Association membership dues for dietitians in foreign service are to be waived for the duration of their services abroad without change in membership status. It should be further stated that it is the responsibility of the member to notify the Chicago office of the Association when she is sent overseas.

New Training Courses for Student Dietitians. According to information received from Gladys E. Hall, educational director, American Dietetic Association, new training courses have been inspected at Charlotte Memorial Hospital, Charlotte, North Carolina, and North Carolina Baptist Hospital, Winston-Salem, of which Margaret Baker and Mrs. Salome Winckler Wells, respectively, are head dietitians.

Volunteer Dietitian's Aide Course. According to information furnished by Melva B. Bakkie, director, Nutrition Service, American Red Cross, an instructor of the Red Cross Dietitian's Aide Course must meet the following qualifications: (1) member of the American Dietetic Association; (2) bachelor's degree with a major in foods and nutrition or institutional management from an accredited college; (3) two years of experience as a hospital dietitian, part of which may have been in an approved training course (teaching experience also desirable); (4) good health and vitality, emotional stability and poise; teaching, organizing, and supervising ability, and ability to gain confidence and cooperation. In exceptional cases where the dietitian does not meet the above qualifications, the director of Nutrition Service at the area office will refer the case to the state or local dietetic association for recommendation.

Unit I of the course consists of five 2-hour meetings and five 3-hour meetings in which the following subjects are covered: introductory information; orientation to hospital dietary department; the normal diet and its adaptation to the medical needs of patients; food serving portions for tray and cafeteria service; organization of tray service to patients; sanitation and accident prevention; introduction to hospital kitchen, diet kitchen, cafeteria and dining room service units; food preparation; and management responsibilities and office duties of the dietitian.

Unit II consists of 15 hours of practice work in the dietary department, divided into five 3-hour units as follows: food preparation in main kitchen, food preparation in diet kitchen, patient's food service in diet kitchen or ward pantry, personnel food service in cafeteria, and management and office duties of the dietitian. As stated elsewhere in this JOURNAL, class members are expected to have completed the Red Cross 20-hour standard nutrition course or its equivalent.

Classes should be organized with no fewer than 10 persons and no more than 20. The introduction to the Instructor's Outline states that "Suggestions and criticisms on the content and organization of the outline will be welcomed by the chapter nutrition committee which will refer these to the director of Nutrition Service at the area office. After a trial period, the outline for the course will be reexamined and may be revised and more fully developed."

Revised Red Cross Canteen Course. The Instructor's Outline for the revised Red Cross canteen course, which was released in April, is to be "used to train persons to meet community problems other than emergency mass feeding," according to Melva B. Bakkie, director, Nutrition Service, American Red Cross. It is hoped that the course will be widely used for training volunteers in the preparation of school lunches, lunches for industrial workers, meals for children in child care centers, and community meals. Katharine Harris, Cornell University, assisted in making the revisions, and suggestions were received from Mrs. Quindara Oliver Dodge, Constance Hart, Mrs. Sally Jarrard, and Martha McBride. Many references to this JOURNAL are listed in the manual. The Red Cross chapters will continue to conduct the course, even though persons who take it may participate in community mass feeding projects under the auspices of groups and agencies other than the Red Cross. Those who enroll must have completed the 20-hour Red Cross standard nutrition course or its equivalent and on completion of the course will receive a certificate showing that they are prospective members of the Canteen Corps of the chapter.

Correction. Due to a typographical error, three words were omitted from the filler at the bottom of page 348, May JOURNAL. The eighth line should read as follows: "Animals fed the high protein special diets survived longest; those fed the low protein diets died most quickly."

Connecticut State Nutrition Committee. On May 15, the Food and Nutrition Committee, Connecticut War Council, in conjunction with the Connecticut Home Economics Association, met at St. Joseph's College, Hartford. Dr. Margaret Mead, National Research Council, addressed the Food and Nutrition Committee on "Food Habits as Related to the Industrial Worker." Later, at a session of both groups, Dr. Mead discussed "The Factor of Food Habits in War and Postwar."

Members of the Connecticut Dietetic Association, the Council of Social Agencies, Red Cross Nutrition and Can-

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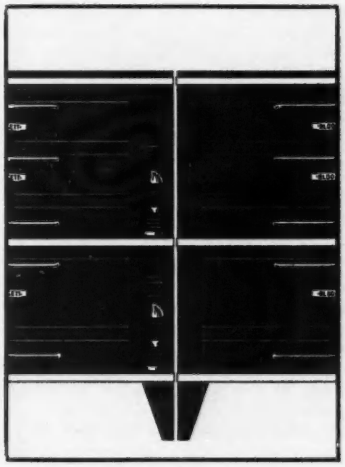

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teen chairmen, and local nutrition chairmen were invited to hear Dr. Mead.

Conference of Food Service Directors. The executive committee met in Cleveland and voted to postpone the 1943 conference. However, on November 6, 1943, a Work Conference will be held at the Hotel Statler, Cleveland, composed of all past and present officers and board members and present committee members. Present-day problems as related to school lunchrooms, college residence halls, and industrial food service groups will be reported and discussed.

Britain Eats to Fight. This is the title of an article in the April *Fortune* which discusses the problems Lord Woolton, as Food Minister, has had to solve in creating new sources of food supply, in revolutionizing the structure of the food industry and in changing the traditional eating habits of the British people.

Canning, Storing, and Drying Equipment. In a radio talk April 16 Secretary of Agriculture Wickard stated that steel had been allocated for 150,000 new steam pressure cookers which will be allotted by County Farm Rationing Committees and, in city areas, by subcommittees. Community groups will get first consideration. An adequate supply of lids and rings has also been assured, manufacturers having been authorized to turn out 65% more lids and rings for glass jars than last year.

Secretary Wickard also stated that full use of food production this year calls for storage of some crops. Plans for storage pits are available from county agents and state agricultural colleges. Cabbage and root crops are adapted to pit storage; potatoes, pumpkins, and squash to storage in cellars; and onions and dried peas and beans in dry places. USDA is working on a program to obtain material for the manufacture of home dehydration units.

Waste of Food in Army Camps Reported. Westbrook Pegler in the New York *World Telegram* for April 20 writes in part as follows: "There were considerable leavings on the plates of the soldiers . . . . but that was a trivial waste by comparison with the wanton destruction which occurred as the waiters advanced along the aisle between the two rows of tables after the meal, dumping huge quantities of untouched food from the serving bowls into garbage cans which they shoved along before them. On each table there were two or three large bowls at least half full of mashed potatoes above and beyond requirements of the diners, all made with rich milk and first class butter, and all that was thrown into the cans along with large quantities of string beans, creamed peas, slaw and custard and many stacks of a dozen or so slices of fine white bread which surely was not contaminated and would not have spoiled if returned to the bread box for the next meal. The only meat that I saw thrown away was that which was left on the plates, the surplus on the platters apparently being returned to the kitchen, possibly to be made into hash, although I am not sure it was so used. The soldiers themselves were conscious of this waste and deplored it although not, of course, to the extent of complaining for, after all, the camp management was none of their business and suggestions might have been resented by their officers. They said, moreover, that they had seen similar waste on other posts and that the only effort at conservation which they had observed had been a rule in one place which required each man to help himself to no more than he could eat. If he left food on his plate he invited a mild form of punishment."

In the same issue of the *World Telegram*, editorial comment states, "More than one-fifth of the food prepared for American soldiers has been going into garbage cans. Army officials, whose testimony the Senate's Truman Committee has made public, acknowledge that, but say measures have been taken to reduce the wastage. No figures are available on the percentage of eatable food thrown away in American homes but that, too, is considerable. Until recently, 'eat it all up' has not been one of our national habits. The Army's caterers, like many a housewife, seem to have made what in normal times was the amiable error of setting too bountiful a table. They overestimated not only the appetite of the average soldier but also the number of soldiers who showed up in the mess halls for meals. . . . Experience has shown that the soldiers gobble up practically all the ice cream provided, and are strong for other desserts, fruits, meats and eggs. But 50% of the bean soup prepared in Army kitchens, 56% of the spinach and 75% of the kale has been ending up in the garbage—which is fairly conclusive evidence that, with respect to eating habits, military life isn't changing the boys so much after all."

Elsewhere in the same newspaper it is reported that a special Senate committee investigating the war effort has made a survey of the food situation in Army camps and it is said that wastage of food in some camps has been reduced from as high as 20 to 25% to approximately 11%.

Refresher Course. A refresher course for dietitians, offering observation and experience in the management of hospital food service will be given cooperatively by the Presbyterian, Montefiore, and U. S. Marine Hospitals July 5–August 13. This is similar to the course conducted in 1942 in which an educational program for student nurses, student dietitians, and medical students concerning food service to patients, and conferences and observation of the formula room, among other subjects, were featured at Presbyterian Hospital under the direction of Nelda Ross, director of the Nutrition Department; menu planning, food ordering and preparation, and diet therapy as applied to chronic conditions, under the direction of Lenna Cooper at Montefiore Hospital; and the administration of food services in a government hospital, conducted by Lois E. Shore, U. S. Marine Hospital. Credits covering this course may be applied toward a master's degree. Fees including registration amount to $82. For further information write to Mary de Garmo Bryan, Teachers College, Columbia University.

Black Markets in Meat. According to a recent "campaign book of OWI," the enormity of black market operations in meat is graphically illustrated in legal marketings of live stock so far this year. The number of live stock slaughtered under federal inspection has dropped greatly from the same period in 1942, and still further from the slaughter expected after last year's record-breaking production. Slaughter of calves under federal inspection was down 15 to 25%, hog slaughter nearly 30% below that expected. Only sheep and lamb slaughter has reflected the increased production of last year. One of the worst phases of the black market, according to the report, is its tremendous waste of critical or scarce materials, such as hides, lard and other fats, and variety meats. Also, small chunks of meat often are left on the bone and cast off into the waste can, instead of going into the making of sausage and luncheon meats. The serious shortage of high-protein animal feeds and fertilizers is due at least in part to the tremendous waste of by-products by black marketeers. A printed information sheet, suitable for posting on a bulletin board or in the home, telling how to recognize black market meats and what to do about the problem, is available in quantity, free, from the Office of Civilian Defense, Washington.

Price Control. A book entitled "Battle Stations for All," published by OWI, gives the facts about the fight to control living costs, and of policies of the various departments and agencies administering the program, for use by speakers, students, and others. According to information in the chapter "Home Fronts at War," the average American family had at least $25 more in the family pocketbook at the start of this year because of the general price ceiling put into effect last May. In the months before that ceiling went into effect, living costs were rising more than 1% a month. The general ceiling cut this increase in half. Had prices risen at the old rate, according to estimates of OPA, the average family would have paid $12.80 more on clothing, $7.54 more on meats, and $3.40 more on other foods. If prices in this war followed the same spiral as in the last,

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No DOUBT you are looking forward to the day when you can have a new kitchen. The stress of these times and the difficulties of keeping up obsolete equipment are making hospitals appreciate the advantages of Hotpoint-Edison Electric Kitchens more than ever. Those having them are indeed thankful, for the superb performance and dependability of electric cooking surpass those of any other method. Those that do not have Hotpoint-Edison Electric Kitchens are looking forward to the day when the war's end will make them available.

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consumers would have paid 6 billion dollars more for commodities, the government would have paid 25 billion dollars more for munitions and construction. Prices of farm machinery rose 74% in the last war, only 6½% in this—a saving to farmers of 230 million dollars. Fertilizer prices rose 86% in the last war; over the past 3 years the rise has been held to 13%—a saving to farmers of 195 million dollars. Copies of the book, which is paper-bound, also discussion questions and suggested speech topics based on it, may be obtained from the Division of Public Inquiries, OWI, Washington.

Rationing Posters. A two-color poster bearing the slogan, "Rationing Means a Fair Share for All of Us," is the first of a series issued by OPA and available at War Price and Rationing Boards, upon request of the Community Service Member. The first poster relates to the buying of groceries, the second shoes, the third meats, and so on, all carrying the same slogan.

The National Food Situation. March 31: Quotas of black pepper, cinnamon, cloves, ginger, mace, nutmeg, allspice, and white pepper for distribution to civilians were reduced in amendment to FD Order 19.1. FD Order 42, replacing WPB Order M-71, provides revised quotas for the use of fats and oils in producing civilian goods, based on the manufacturers' average use during 1940 and 1941 as follows: margarine, 180% of base period; other edible products including shortening, 88%; soap, 84% of primary fats and oils and 100% of domestic vegetable oil fats. The release states that although domestic production of fats and oils—chiefly soybean, peanut and linseed oils, and lard—has increased, the war has reduced imports and increased the demand for all fats and oils both in the United States and other of the United Nations.

April 1: Functions of administering and enforcing the provisions of meat restriction Order 1 were transferred from OPA to USDA. At the same time an order was issued restricting quotas of meat for persons subject to the restriction order (those producing more than 500,000 lb. meat in one quarter of a year) to: beef and veal, 65% of deliveries made in corresponding period of 1941; pork, 75%; lamb and mutton, 70%.

April 2: FD Order 44, issued by USDA, reserves for government purchase 55% of canned shrimp and horse mackerel and 60% of canned tuna, bonito and yellowtail. According to the official announcement, the amount of canned fish available to civilians from the 1943 pack should be somewhat larger than from last year's pack. Due to a smaller carryover of canned fish in 1943, however, the per capita supply for this year may be about three-fourths of the 1942 civilian consumption. The addition to the reservation list of such war-important seafoods as tuna and shrimp will make it possible to release to civilians a greater quantity of some other varieties and at least a portion of all principal packs, and still meet government requirements. The quantities of 1943-pack canned fish which will be available to civilians under the order are estimated as follows: salmon, 130 million pounds, pilchards, 81 million pounds; Atlantic sea herring including sardines, 29 million pounds; tuna, bonito and yellowtail, 21 million pounds; shrimp, 6 million pounds; and smaller quantities of other varieties. These quantities are based on conservative estimates of the 1943 pack, and may be increased as the season progresses.

The Monthly Egg and Poultry Markets Review for March stated that egg production continued well ahead of last year and into-storage movement was abnormally heavy. As of February 1, farmers' reports indicated the largest turkey crop on record, 12% over 1942. Hatchery production of baby chicks continued highest in history. The March *Monthly Domestic Dairy Markets Review* reported that U. S. production of evaporated milk for February was estimated at 207 million pounds, far short of amount produced in same month last year, stocks held by manufacturers on March 1 being the lowest since 1936 and less than one-half the supply on hand a year ago. Production of dry milk products was on the increase, but with the government absorbing 90% of spray-dried skim milk, amounts available for civilian use were limited.

FD Order 45 reserves 55% of supplies of dry edible beans and 60% of dry peas and split peas of certain classes for military and allied needs. Civilian per capita consumption during 1942–43 will total about 8 lb. dry beans, or 90% of average consumption, and nearly 1 lb. dry peas, or about 75% of average consumption. For dry beans this means approximately 1 lb. more per capita this year than was indicated when beans and peas were added to the list of foods rationed to civilians, made possible by imports from Mexico and other bean-producing countries.

Dried prunes and raisins to the amount of 31,000 tons were released by FDA for sale through regular commercial channels. The two fruits were "temporarily removed" from the ration program by OPA.

April 6: In order to prevent diversion of honey, production of which dropped considerably in 1942, from customary consumption channels (*i.e.* manufacture of food products) and protect the supply for household and restaurant use, as well as to make needed amounts constantly available for war purposes, FD Order 47 provides that during 3-month periods no firm nor individual may use in manufacturing other products more than 600 lb. or 120% of the quantity of honey so used during the corresponding period of 1941.

Sixteen retailers and thirteen leading wholesalers have been invited to serve on the National Retail and the National Wholesale Food Industry Advisory Committees, respectively, of FDA.

April 10: Amendment 1 to FD Order 11 removed present restrictions on the sale of milk in less-than-quart-size containers for consumption in factories, schools, offices, playgrounds, and similar places; modified the provision preventing milk handlers from purchasing bottled milk or cream from more than 2 handlers during a calendar month (under the amendment, only stores, restaurants, hotels and similar establishments are limited to purchases of bottled or bulk milk and cream from not more than 2 handlers in any 3 consecutive days); prohibited stores, restaurants, hotels and similar establishments from refusing delivery of milk or cream they have previously ordered, and from returning or offering to return milk or cream previously delivered to them.

April 12: WFA (War Food Administration) announced that food processing plants are eligible for the Army-Navy Production Award, the symbolic "E" for excellence. Both War and Navy Departments have authorized FDA regional offices to nominate candidates for the honor. Quantity and quality of production in the light of available processing facilities, ingenuity and cooperation with the government in developing and producing war foods, overcoming production obstacles, avoidance of stoppages, maintenance of fair labor standards, training of additional labor forces, effective management, accident prevention, health and sanitation, etc. are factors in selecting recipients for the award.

During the second week in April OPA ruled that butchers may not reduce point values without lowering prices, and declared rendering fats and bones point-free for use as animal foods and for other purposes. The effective date for ceiling prices on retail beef, lamb, veal, and mutton was suspended for one month to permit a reexamination of prices in the light of the recent "hold the line" presidential order.

Retail prices of fresh cabbage, carrots, lettuce, peas, snap beans, spinach, and tomatoes were to have ceilings through uniform mark-ups over net cost, effective April 22. Canned spinach was brought under dollars-and-cents maximum per dozen cans, also canned grapefruit.

According to *Victory Bulletin*, April 14, as one of the first acts under the President's mandate to extend ceilings to all cost-of-living commodities, Price Administrator Brown

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SAVORY MEAT LOAF

1 pound ground raw beef
1 cup uncooked Cream of Wheat
1 egg, slightly beaten
1 small onion, minced
2 teaspoons salt
¼ teaspoon pepper
¼ teaspoon sage or thyme
2 tsps. prepared mustard
1½ cups liquid (tomato juice, mixed vegetable juices drained from cooked or canned vegetables, or bouillon cube dissolved in boiling water).

Combine beef, Cream of Wheat, egg and seasonings and add 1 cup liquid. Mix together lightly and pack into greased baking dish. Bake in moderate oven (350° F.) about 1 hour. Baste with remaining ½ cup liquid during cooking. Makes 8 servings.

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authorized OPA regional offices to set maximum prices for food and beverages served by restaurants, cafeterias, hotels, and other eating and drinking establishments. Week of April 4–10 was established as the base period. All restaurants were directed to file with local War Price and Rationing Boards a copy of each menu or price list used in this period, the final date of filing to be May 1.

Continuing its attack on the problem of farm labor, the Department of Agriculture announced that an agreement had been signed with the government of Jamaica providing for the importation of up to 10,000 Jamaican agricultural workers. Plans for recruiting and placing a Women's Land Army of about 60,000 city and town women were announced by WFA. Florence Hall, Port Austin, Michigan, Extension Service field agent in 12 northeastern states since 1928, will head the Women's Land Army of the U. S. Crop Corps. It is expected that about 360,000 women will be enrolled for farm work as soon as arrangements are completed. About 300,000 will be women who can spare week-ends, a few days or a few weeks for the job of producing and harvesting food.

Standardized and simplified glass containers were prescribed by WPB for commercial packaging of 21 additional food products. A steel-saving glass-top closure for home canners is now being produced in quantity; it is 70 mm. in diameter and will fit any standard home canning jar as well as all commercial pack screw-top jars with the same thread and mouth size. Sugar for home canning of 1943 fruit crops will be available to housewives on approximately the same basis as last season.

April 17: WFA and OPA announced that fats will be allotted for bakery products this quarter in an amount equal to consumption during the corresponding quarter of 1942, an increase from the 70% ration granted originally under the meat-fats program. Representatives of the baking industry said they will pursue the policy of emphasizing production of bakery goods which utilize cereal products in large quantities and discourage the use of those requiring considerable shortening.

April 26: To prepare for the spice needs of increased home canning and cooking during the summer, WFA increased the quotas of black and white pepper, cinnamon and allspice of wholesalers over those announced previously, the quotas to be reduced again during the last quarter of the year, since the supply of spices has not been increased. The Combined Food Board has allocated supplies of cinnamon, mace, nutmeg, and pimento available from British Empire sources among 6 areas: Canada, the United States, other western hemisphere countries, the U.S.S.R., the United Kingdom, and other eastern hemisphere countries. In addition to quantities allocated, the Board has set up an unallocated reserve for use in adjusting possible inequities.

The National Food Situation for April, published by the Bureau of Agricultural Economics, USDA, states that, assuming no changes in the prospective plantings, average weather, and the continuation of the present trend in live stock production, the production of food for human consumption in 1943 will be about 30% larger than the yearly average for 1935–39 and about 3% more than the record production in 1942. It is estimated that about 1 million actual or potential workers will have migrated from the farm population between July 1942 and July 1943, including those who entered the armed forces. Military and Lend-Lease uses will take 20 to 25% of food production, civilians the remainder, the total share of production allotted to civilians being approximately the same as average yearly production during 1935–39. As a result of increases in our military forces, the civilian population in 1943 will be more than a million smaller than average civilian population in 1935–39, and the proportion of adult civilian consumers therefore less. However, with more people now able to purchase foods formerly beyond their means, the demand for food more than compensates for differences in civilian population in these two periods.

The civilian per capita supply of meats for the year as a whole is expected to be 126 lb., as in 1935–39, but in those years a large section of the population consumed as much as 200 lb. per capita. The per capita civilian supply of fats and oils (including butter) for 1943 is expected to be about 46 lb. or 2 lb. less than in 1935–39. The supply of all dairy products (milk equivalent) available for civilians will be close to 770 lb., in contrast to 806 for 1935–39.

A complete list of the foods on which ceiling prices were announced January 1 to April 1, 1943 is included in *The National Food Situation*, with details as to how the prices were established.

Food Industry Advisory Committees. More than thirty strategic food industries, including processing, wholesaling, and retailing, are represented by Food Industry Advisory Committees, according to USDA *Food Trade Letter* of April 12. The government outlines a given war food problem—a representative industry group suggests the solution—how to develop new or substitute products, how to stretch raw commodities, economize on critical materials, avoid transportation tie-ups, and get more complete mobilization of food resources generally. In fats and oils, for instance, this approach is obtaining results. Thanks to research work of the Edible Oil Refining Industry Advisory Committee, a nutritious vegetable oil previously used only for industrial purposes may now be manufactured in volume for shortening products for overseas shipment. The Soap and Glycerine Industry Advisory Committee reports a transportation saving of from 35 to 50% of the tank and box cars used by that industry, through increased loading, faster unloading and dispatching of cars, and by use of truck and water transportation. Tank car deliveries of urgently-needed soybean oil are being accelerated by the recommendations of the Soybean Processors Industry Advisory Committee. In the baking powder field, a government-industry committee is helping schedule raw supplies 6 months in advance, and stockpiling materials. Housewives will not lack for this key foodstuff as the need for more home cooking and baking increases.

Institute of Food Technologists. According to a press release, the Fourth Conference of the Institute, St. Louis, June 2–4, is to be "a refresher course of study for over five hundred top-flight food researchers, hunger fighters, and processors, covering the rapid advances which have been made in the food field under the impact of war." The annual food technologists' dinner, the occasion of the award of the Nicholas Appert Gold Medal to the outstanding food technologist for 1943, will be a ration-free affair. Tomato juice cocktail, rehydrated; broiler turkeys, a point-free novelty; dehydrated vegetables; and apple pie made from dehydrated apple nuggets will constitute the menu.

The program includes: Col. Rohland A. Isker, "Types of Food Needed by the Armed Forces"; a symposium on the dehydration of foods and one on containers and packages; and papers on "Tray and Tunnel Methods and Equipment"; "Plant Problems in the Dehydration of Vegetables and Fruits"; "Dehydration of Eggs"; and "Dehydration of Meats." Other subjects include "The Container Situation as Affected by the War Situation"; "Containers for Heat Processed Foods"; "Compressed Dehydrated Foods"; "Concentrated Juice"; "Rehydration of Dried Fruits and Vegetables"; "Control of Fat Deterioration"; and "Control of Enzymatic Actions in Food."

Legislation for "Better Diets." The Pace Bill HR2276 would "provide for the development of better diets and improved nutritional status for the people of the United States and for other purposes" and provide funds to further basic research in nutrition in cooperation with USDA. The bill asks for $1,000,000 annually for the duration of the emergency, to be allotted on the basis of $10,000 to each state and territory and to Puerto Rico. The money would be used for research and production of varieties of foods of greater nutritional significance.

The Newer Concepts of Meat in Nutrition

Meat . . . and Its Rôle in Optimum Nutrition

OPTIMUM nutrition calls for adequate protein intake. While scientific opinion varies, defining daily protein needs as ranging from considerably smaller amounts to as much as two grams per kilo of body weight, this fact merits recognition: hypoproteinemia constitutes a definite pathologic state; in the opposite direction, excessive protein intake merely leads to deaminization of the ingested surplus.

Hence outstanding clinicians prefer to err on the side of safety and advise a minimum intake of one gram per kilogram of body weight daily for the adult, and twice as much and even more during the growth period.

Among the protein foods of man meat rightly holds its preferred position. Its content of biologically adequate protein, in the raw state, averages 20 per cent. In the cooked state it may reach as high as 35 per cent. In addition meat is a good source of essential B vitamins and the minerals iron, copper, and phosphorus.

The aroma of properly prepared meat arouses the appetite, and its extractives stimulate the flow of gastric juices, thereby increasing the desire for food and the relish with which the meal is eaten.

The Seal of Acceptance denotes that the statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

American Meat Institute

CHICAGO

Nutrition in Wartime Symposium. About 700 attended the symposium at the Medical College of Virginia, March 25–27, the program for which appeared in this JOURNAL for May. It is understood that transcripts of the talks were made on records during the meeting and from these mimeographed copies are being made available to those requesting them, according to Marguerite Pettee, chief nutritionist of the College.

Safe Canning Methods. USDA announced April 7 that the use of the steam pressure canner is the only method it can recommend for the canning of certain nonacid products, including such vegetables as beans, peas, corn, spinach, other greens, and asparagus, as well as meats. In acid products such as fruits and tomatoes, rhubarb, and pickled beets, botulinum spores are made harmless or destroyed by boiling temperatures, and these foods can be safely canned by the boiling water-bath method. Home-canned nonacid vegetables processed by the boiling water-bath method can contain botulinum toxin even if there are no signs of spoilage. To be safe, such products should be brought to a boil and boiled for at least ten minutes after the can or jar is emptied before they are eaten or even tasted. Boiling for a full ten minutes or more will destroy the toxin, though not the botulinum spores. It is the toxin, not the organism itself, that is harmful. Any nonacid canned foods that show evident signs of spoilage should be immediately buried beyond the reach of domestic animals. In stating its recommendations, USDA made clear that, though bacillus botulinum is widely distributed in soils, the number of cases of poisoning from home-canned nonacid foods is relatively small. A large percentage of those reported have occurred on the Pacific Coast or in the Mountain and Great Plains States. Outside of these regions, some state agricultural colleges approve alternate methods of canning nonacid foods, though all recommend the pressure canner as first choice. Each state college publishes directions it considers safe within its own state.

Nutrition Aids from USDA. Leaflets recently published and available upon application include "Cheese in Your Meals" containing recipes for cheese sauces, Welsh rabbit, omelets, puffs and soufflés; and "Vacuum Cleaners and Carpet Sweepers" detailing instructions on the use and care of these necessary adjuncts to housekeeping.

How to Eat Well Under the Ration System. Prepared under the direction of Helen L. Johnson, nutrition consultant, Bureau of Child Hygiene, Connecticut State Department of Health, Hartford, a folder entitled "Learn How to Eat Well Under the Ration System" may be obtained upon application to Miss Johnson. Various substitutes for rationed foods are suggested and a sample day's menu with necessary adjustments is offered.

Impressions of Puerto Rico. Under date of March 30, Dr. Hazel E. Munsell, Research Associate in the School of Tropical Medicine and University Hospital of the University of Puerto Rico, San Juan, writes in part as follows concerning her impressions and experiences:

"As I get to know the people better and become acquainted with those who are interested in improving conditions here I am more and more impressed by their latent talent. Much of this is wasted for want of means of expression. The people of the United States should have a different impression of the people of Puerto Rico than that gained by reading recently published articles. This island is greatly overpopulated, to be sure, and there are too many slum areas where conditions are most undesirable, but what large city in the states does not have its slums or sore spots to which little or no attention is given these days? It seems a pity always to present conditions in Puerto Rico by featuring its slums.

"There is much of beauty in this little island. I doubt if there are many areas of similar size where there is more in the way of diversified scenic beauty. Within a few hours one may travel from the seashore and the vividly blue ocean to view bewildering masses of tumbled hills and mountains covered with fields and tropical vegetation and here and there to the very top the little huts of the *jibaros* clinging to their sides. Recently I visited one of these small houses built on the very tip top of a narrow ridge and in all directions for long, long distances we could see the high hills and deep valleys and the fields and forests and houses with here and there a zigzag path leading to them. As we waited there we could see a deluge of rain approaching from a fast-moving black cloud, a frequent occurrence on the windward side of the mountains. It was a beautiful sight to see the rain-streamers following along the hillsides. In a short time the cloud had passed and the sun was shining again on the glistening leaves.

"In the home that we visited the mother had abandoned six children and the oldest child, a girl of thirteen, was the homemaker. Every day she went to the nearby school and in her home economics classes learned to cook and sew and keep the home, while the younger children were cared for by the aunts who lived near. This arrangement had been made by the home economics teacher who is also the social worker in the neighborhood. The teacher, who graduated from the University two years ago, is doing an excellent job and is interested and sympathetic to the problems she must deal with. On the day we visited the school the class prepared a four-course dinner at which I had the privilege of being a guest. I can assure you that it was an excellent meal, well-prepared and well-served. Our little homemaker of the mountain top was one of those who helped in the preparation.

"If the people of the United States learn to accept the people of Puerto Rico as loyal American citizens, for that is what they are, and give them opportunities to use the many talents they have, one important step will have been taken toward the salvation of this island. I urge those with whom I discuss the problems of Puerto Rico and who are in a position to help, to take every opportunity to make themselves articulate to those groups in the states who are working in similar fields. It seems to me that this is one very effective way to promote a better understanding."

National Conference of Women. A symposium entitled "What Kind of a World Do We Want?" sponsored by the New York *Times*, was held at the New York Times Hall, April 7. Speakers included Mrs. Anne O'Hare McCormick, foreign correspondent for the New York *Times;* Virginia C. Gildersleeve, dean, Barnard College, New York; Frieda S. Miller, special assistant to John G. Winant, Ambassador to London; Mrs. J. Borden Harriman, formerly Minister to Norway; Mrs. Walter H. Beech, secretary-treasurer, Beech Aircraft Corporation; Mrs. Margaret Culkin Banning, Mrs. Pearl Buck, and Fannie Hurst, authors; Frances Perkins, Secretary of Labor; Dr. Margaret Mead, American Museum of Natural History; Judges Camille McGee Kelley and Dorothy Kenyon, New York. The program included the opinions of the speakers in regard to postwar planning, the need for economic adjustments, and the use of legislation as an instrument for social cooperation between capital and labor and between domestic and foreign governments. Dr. Mead stressed the need to show the American people the necessity for cooperating with a set of countries, each of which has its own special contribution to make to a postwar world. "There is one field," she said, "in which women have had more experience than have men, that of developing human beings and conducting smooth human relations within the family in such a way that individual growth is possible. . . . Women know that if you are to develop good human beings, you must leave them free, feed their bodies, guard their footsteps, protect their paths, give them materials, books and words, and let them develop toward their own goals. So let us take this knowledge of women and insist that social science make the necessary inventions to set the world's feet on the right path but leave the next generation free."

Sore Throat Epidemic. According to the *Journal* of the American Medical Association for April 17, an outbreak of 56 cases of sore throat early in March in a Saratoga County,

On their War Record...

Sunfilled pure concentrated ORANGE and GRAPEFRUIT JUICES will simplify the economical planning of post-war menus

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods

CITRUS CONCENTRATES, INC.
DUNEDIN, FLORIDA

As previously announced, the total output of Sunfilled concentrated citrus fruit juices has been drafted for service of the armed forces. Not only have they provided a solution to the problems of perishability and cargo space required to transport bulky fresh fruits . . . they afford the equivalent in flavor, body, nutritive values and vitamin C content as well. This achievement of Sunfilled Products means a better balanced diet for our fighting forces and those of our allies receiving them as lease-lend supplies.

Sunfilled quality, economy and convenience count today! These dependable qualities will also serve to advantage in the planning of post-war menus. Until present restrictions are modified, available fresh fruits, though more costly and less convenient to prepare, should prove adequate for civilian needs.

Help-Shortage

Eased by simple-to-prepare Downyflake* MIXES!

HELP becomes a small problem with *Downyflake* Mixes. They are batters in dry form . . . shortening, egg yolk, powdered skim milk and other quality ingredients already included. Just add water . . . stir . . . bake. The finished, delicious products—in a wide, appetizing variety: ginger cake, bran muffins, biscuits; etc., listed below—equal finest baker's quality.

Results-guaranteed *Downyflake* Mixes cut down waste of food left uneaten because of unpalatability or improper preparation due to inexperienced or hurried help. Accurate control of kitchen budgets is simple. Save time . . . labor . . . cut costs.

Ginger Cake Mix—like the rest of the *Downyflake* Mixes—provides extra, important nutritional values in vitamins & minerals (see chart at right). May we suggest you try a sample order from your local jobber?

*formerly FIXT

NUTRITION-RICH GINGER CAKE

A serving of 100 grams of GINGER CAKE (no icing) will furnish

173 I.U.	Vitamin B_1	107 mg.	Calcium
1.91 mg.	Niacin	203 mg.	Phosphorus
7.68 mg.	Iron	326	Calories

Downyflake FOOD PRODUCTS
DIVISION OF DOUGHNUT CORPORATION OF AMERICA
393 Seventh Avenue, New York City, New York

Waffle • Biscuit • Egg Griddle • Buckwheat Griddle • Bran Muffin • Corn Muffin • Ginger Cake
Spice Cake • Coffee Cake • Handy Donut • Yellow Cake† • White Cake† • Pie Crust† • Devils Food†
†temporarily discontinued

New York, village was traced to the consumption of raw milk. *Health News* reported, it was stated, that although the investigation had not been completed, it was estimated that, on the basis of the number of consumers of the suspected milk, a total of 130 persons had been affected. The attack rate among persons drinking the incriminated milk was 36.4% for those under 15 years of age and 44.1% for those over 15. Pasteurization of the suspected supply which was instituted immediately was promptly effective.

Indiana State Nutrition Council. April releases to all county nutrition chairmen in Indiana include outlines of weekly menus showing housewives how to use all rationing points to the best advantage, also timely recipes in line with food rationing and other suggestions for the use of leftovers and certain foods which need emphasis at the moment. Included also are the highlights of a talk by Dr. Robert S. Goodhart before the Council at Indianapolis, March 19, in which the following suggestions regarding the feeding of industrial workers are incorporated: Replace candy and soft drinks with foods of greater nutritional value. "No special case can be made for energy value of sugar." Recommend enriched flour, iodized salt, fortified margarine. Allow 10 to 15 minutes average eating time; 30 minutes minimum eating period is desirable. Decentralize eating facilities so workers will not have so far to go for mid-shift meals. Employees should be discouraged from working through lunch period. Ten-minute rest periods should be allowed to combat fatigue and sustain production—the peak of accidents is at 10:30 a.m. and 4 p.m. or comparable hours on other shifts. Serve milk, citrus fruits, tomato juice, sandwiches of enriched bread with a substantial filling, as snacks.

In addition, attention is called in the release to three prominent industrial nutrition programs now in operation, namely, Servel, Inc., Westinghouse Electric & Manufacturing Company, and General Electric Company.

Nutrition Consultant, West Virginia. Unassembled examinations for this position in the West Virginia State Health Department have been announced by the Merit System Council, 212 Atlas Building, State of West Virginia, Charleston. Applications will be accepted continuously but new registers will be established from applicants who file no later than June 26, 1943. Salaries range from $2280 to $2760 and the requirement of residence in West Virginia has been waived. Positions now open offer tenure of office and definite promotional possibilities.

Presbyterian Hospital (New York) News Letter to Former Students. The March issue of this letter tells of the work of the Presbyterian Unit now overseas and of the active participation of members of the staff at home in the Civilian Defense program. Student dietitians for 1942–43 include: Barbara Albright, Florida State College; Ruth Boyer, University of Idaho; Anita Conboy, St. Joseph's College (Maryland); Martha Coleman, Oklahoma A. & M. College; Betty French, Ohio University and Ohio State University; Rachel Koch, Iowa State College; Ann Novick, Simmons College; Helen Plocker, Iowa State College; and Geraldine Rolfe, Michigan State College. Prospective students for 1943–44 include: Anne Larrimer, Purdue University; and Marilyn Mason, Rhode Island State College.

Dr. Lillian B. Storms Appointed to Advisory Committee, Nutrition Foundation. The appointment of Dr. Storms, Gerber Products Company, Fremont, Michigan, to the Food Industries Advisory Committee, has been announced by Nutrition Foundation. The committee serves as a liaison group between the foundation and the food industry.

Rachael Reed Appointed Director of Consumer Relations, The Borden Company. Miss Reed, now at 350 Madison Avenue, New York, was formerly mid-west director of consumer relations for The Borden Company, with offices in Chicago. She is a graduate of Drexel Institute and received her M.A. degree in biochemistry from Teachers College, Columbia University. Miss Reed is a former president of the Ohio Dietetic Association.

Massachusetts Dietetic Association. At the May meeting, Simmons College, May 8, a round-table discussion on "Teaching Nutrition Today" was conducted by Dr. Frederick C. Stare, head, Division of Nutrition, Harvard Medical School. Dr. Olga Brucher, head, Department of Home Economics, Rhode Island State College, and Dr. Martha Potgieter, assistant professor of home economics, Connecticut State College, discussed the teaching of nutrition to lay persons. The annual business meeting and election of officers preceded the discussions.

To date the following members of the state association are in the service: Second Lieutenants Gertrude McDonald, Marion Woolworth, Eileen Reed, Rosamond Lynch and Alice Gertsen, and Ensigns Marjorie Reed and Mabel Sherrill.

Mrs. Rose Beaumont has resigned as head dietitian, Peter Bent Brigham Hospital. Engla Anderson, formerly of Johns Hopkins Hospital, is now head dietitian, Beth Israel Hospital.

Mrs. Beula B. Marble was made an honorary member of the state association upon her resignation. Mrs. Marble is now in Texas with her husband, Lt. Col. Marble, who is chief of the Medical Service, Harmon General Hospital, Longview.

Montana Dietetic Association. At the annual meeting, Billings, March 19–20, in conjunction with that of the Montana Home Economics Association, the program included the following: "Point Rationing and Its Relation to Nutrition," Mr. John T. O'Brien and Bessie McClelland; "Price Control and the Cost of Living," Dr. R. R. Renne; and "Home Management in Wartime." At a joint association dinner Mrs. L. B. McMullen, Billings, discussed "Toward Freedom." Nellie De Kalb Wolfe, Montana State Hospital, and Anna Platt, University of Montana, were re-elected president and vice-president, respectively, and Dorothy Conroy, Veterans Administration Facility, Fort Harrison, was appointed secretary-treasurer of the state association.

New Jersey Dietetic Association. The program of the eleventh annual meeting, Beth Israel Hospital, Newark, April 29, included the following: "Teaching Nutrition to Student Nurses," round-table discussion, Marie O'Hora presiding; "Report of Teaching Problem in New Jersey," Jane Holden, New Jersey League of Nursing Education; "Industrial Feeding," Dr. H. R. Kilander, ODHWS; and "Present Day Hospital Topics," Margaret Gillam, New York Hospital.

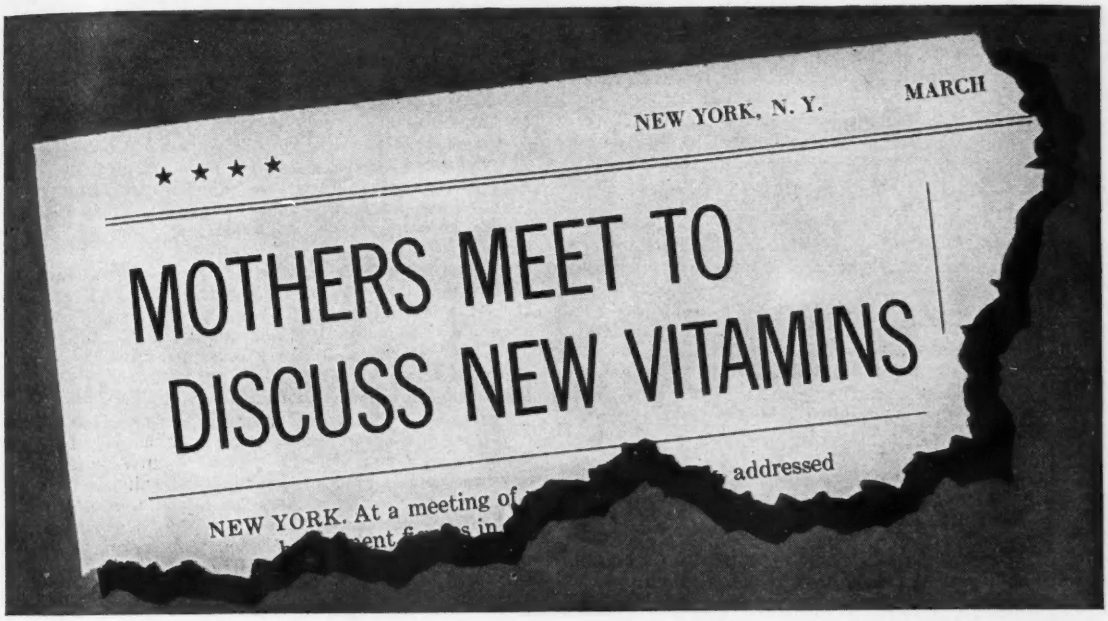
Greater New York Dietetic Association. The program of the April meeting, held at the auditorium of the New York chapter of the Red Cross, included the following: "The Red Cross Dietitian's Aide in Hospitals," Melvie B. Bakkie, national director, Nutrition Service, American Red Cross; "Training Course for Red Cross Volunteer Dietitian's Aide Corps," Margaret Gillam, New York Hospital; and "Food Rationing," B. V. Cocoran, OPA.

The meetings concerning meal planning for restaurant and hotel operators, chefs, stewards, etc., sponsored by the Nutrition Committee of Greater New York, as announced in this JOURNAL for May, were held in the *Herald Tribune* auditorium April 20 and 27 and May 4, and consisted of two demonstrations using nonrationed raw and cooked vegetables and meat substitutes, and discussions on menu planning, recipes and suggested plate combinations.

New York State Dietetic Association. The Executive Board at its midwinter meeting voted to cancel the annual state convention for 1943, due to the war situation and the resulting labor and transportation difficulties. Owing to the illness of the editor, Henderika J. Rynbergen, publication of the winter issue of the state *Bulletin* was omitted. Through a circular letter, published as a substitute, members were urged to continue the registration of all dietitians, as recommended by the House of Delegates and Executive Board of the American Dietetic Association.

Members of the state association were invited to attend

THE NUTRITION CLINIC...*with special reference to canned foods*



When your patients ask about vitamins...

WHEN the daily papers report on the forward march of medicine, the physician frequently hears echoes from his patients.

For example, "Should the new vitamins be included in my diet?" is not an improbable question for an intelligent patient to ask you.

Our Nutrition Laboratories, keeping abreast of the literature, have prepared an answer. It is given below. The references also are given. It is hoped that this material will be useful to you.

"THE STATUS in human nutrition of certain of the less well-known vitamins has not yet been definitely established. (1) Although it is quite likely that certain of these lesser-known factors—or other factors not yet postulated—play important roles in human nutrition, it is unlikely that a varied diet, including canned foods, which supplies optimal amounts of the better-known factors, will be deficient with respect to the less-known vitamins." (1) *What are the Vitamins?*, W. H. Eddy, Reinhold Publishing Corp., New York, 1941.

AMERICAN CAN COMPANY

230 PARK AVENUE, NEW YORK

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods and Nutrition

The Seal of Acceptance denotes that the nutritional statements in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

the meeting of the New York State Home Economics Association, Saratoga Springs, May 21–22.

Mr. I. Franklin Slater, area supervisor, FDA, recently addressed the Rochester Dietetic Association on the problems of food distribution. The recent opening of the new 350-bed St. Mary's Hospital, Rochester, was attended by many dietitians who examined with interest the complete central tray service with stainless steel equipment in the main kitchen and the refrigerated garbage room.

Members of the Albany association conducted a food forum on "Dehydration" for the Women's Auxiliary Medical Society. Mr. Charles J. Tressler, Jr., Geneva Experiment Station, presented recent research aspects of the subject.

The Central New York Dietetic Association had as speakers at recent meetings, Mr. Frank Shattuck of Schrafft's Restaurants, "Food Rationing and How It Affects Food Service"; and Mrs. William Hillen, "Customs of Japan."

Oklahoma Dietetic Association. At the sixth annual convention, April 17, Oklahoma City, officers for 1943–44 were elected as follows: president, Mary Alice Bolt, Air Cadets Training School, State Teachers College, Edmond; president-elect, Veda Bailey, Wesley Hospital, Oklahoma City; vice-president, Mrs. Muriel Tice Nelson, American Red Cross, Tulsa; treasurer, Marguerite Ross, Food Service Units, Oklahoma A. and M. College; and secretary, Esther Dinwiddie Phillips.

Eloise Argo resigned as administrative dietitian, the University Hospital, and was married on May 16 to Dr. Maurice Gephardt, who will intern at the Research Hospital, Chicago.

Texas Dietetic Association. The program of the ninth annual convention, a War Conference, appeared in this JOURNAL for May. The recipes for meat extenders and substitutions which had been sent in by members of the association were bound into attractive folders by Mrs. Mary B. Clark, Southern Methodist University, and served as place cards at the informal dinner on Friday evening. The association accepted the invitation of the Houston group to hold the 1944 meeting in that city. The following officers were elected for 1943–44: president, Rosalie Godfrey, Littlefield Dormitory, Austin; president-elect, Olive Black, Woodrow Wilson High School, Dallas; vice-president, Dorothy Russell Goetzke, Texas Technological College, Lubbock: secretary, Esther Christenson, Kirby Hall, Austin; treasurer, Frances Low, Methodist Hospital, Houston; and chairman of nominating committee, Rosa Spearman, Board of Education, Dallas.

Winnie Temple, dietitian at the Lubbock (Texas) General Hospital, received her commission as Second Lieutenant, Army of the United States, and reported for duty at the station hospital, New Orleans, April 1.

Utah State Dietetic Association. Mrs. Margaret Doidge Knudsen, president, presided at the March meeting at which the new code of ethics, means of distributing the brochure *Dietetics as a Profession*, state registration of dietitians, and revision of the constitution were discussed.

Over 2000 certificates for completion of the Nutrition Course and over 350 for the Canteen Course have been awarded by the Salt Lake County chapter, as a result of 77 nutrition classes and 12 canteen classes, conducted under the leadership of Mrs. Frank M. McHugh, Red Cross nutrition chairman.

Katharine S. Bielby has been appointed representative to the State Nutrition Council. Other recent appointments include: Frances Coe, head dietitian, Washington State Hospital; Mrs. Elaine Frogner Stewart, Oswego, Oregon; Mrs. C. W. Wetterstrom, Salt Lake General Hospital; and Mildred Bowers, University of Utah Cafeteria.

Wisconsin Dietetic Association. Dr. Helen Hunscher, professor of home economics, Western Reserve University, was one of the speakers at the Dietetic War Conference, Milwaukee, May 22.

The Milwaukee County Nutrition Committee has set up an interesting fruit and vegetable-drying exhibit at the Nutrition Center, including a home-made drier which is easily constructed and can be readily duplicated.

Members of the Milwaukee Dietetic Association were guests of the Borden Dairy for the April meeting, and were conducted through the Waukesha plant where "Hemo" is made.

A supplement to the *Wisconsin Medical Journal* for April contained information concerning the plan used in Dane County to provide extra rationing points for patients requiring a therapeutic diet. Esther Bast, Jeanette Mikeljohn, Ruth Dickie, and Mrs. Elizabeth Helgers assisted in the preparation of the guide. The Milwaukee County Institutions have prepared a similar plan.

Red Cross nutrition classes are now being made available to factory workers in Milwaukee, classes being held in the factory after each shift. In addition, a nutrition lesson is to be incorporated in each course in first aid.

News From Our Advertisers and Exhibitors. Published by *Borden Company*, 350 Madison Avenue, New York City, this company's *Review of Nutrition Research* states "within the past two years, evidence has been steadily growing that butter contains a factor capable of promoting superior growth. At present there are indications that this factor may be especially significant in the nutrition of infants and young children who are dependent, to a large degree, on milk as a major food in their diet. Because certain vegetable fats and oils have been found to be inferior to butter fat in growth-promoting properties, nutrition authorities have voiced the opinion that products in which butter fat has been partially or completely replaced by such vegetable fats cannot be considered equal in nutritive value to the original butter-containing foods."

Reprints of an article on "Health for Victory Club" which appeared in *Manufacturer's News* are available from The Home Economics Institute, *Westinghouse Electric & Manufacturing Company*, Mansfield, Ohio. The reprint graphically portrays Mrs. Julia Kiene's demonstration methods, while views of some of her audiences attest her ability in promoting the interest of the housewife in better nutrition for the industrial worker.

Marjorie H. Black, Home Economics Division, *National Canners Association*, Washington, has prepared for distribution a pamphlet entitled "Today's Canned Foods" which presents briefly the facts about the canned food situation and gives suggestions for the best use of canned foods under wartime conditions. Recipes for canned seafood, fruits and vegetables are included.

Florida Citrus Commission, Lakeland, offers a booklet on "The Importance of Vitamin C in Your Home Nutrition Program." Vitamin requirements, sources of vitamin C, how to buy and use citrus fruits wisely and well, salad and dessert recipes, and a group of menus featuring citrus fruits, are included.

Mr. L. A. Van Bomel, president, *National Dairy Products Corporation*, New York City, calls attention to their series of public information advertisements, "to create public understanding of the vital role the farmer plays in war and peace," based on "the conviction that the farmer needs more respect for his calling, and that the public should accord him more."

General Foods Corporation, New York City, in the first quarter of 1943 had net earnings of $3,579,992 compared with $2,737,481 for the same period a year ago.